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Front page: Air-raid of the Vrlika Health Center. Federal Army bombers, armored artillery and other forces, together with Serbian terrorists, attacked the village of Kijevo and a small town of Vrlika on August 26, 1991, at 2.15 p.m. In Vrlika, the Center for Handicapped Children was severely damaged. It took several days to rescue the children. Two of them (I.K. and M.O.) died during the evacuation.

Editorial - War Supplement 1

The establishment of the Croatian Medical Journal has been a long lasting dream of Croatian scientists working in the field of biomedicine. Unfortunately, for a long time we lived under regimes that forbade the Croatian name to be associated with almost any subject. Even the very Croatian language was called Serbo-Croatian or, at best, Croato-Serbian. Unfortunate proofs of this statement can easily be found in any medical library where, in computer compilations of scientific publications, like Medline, our language still bears that name. With the dawn of democracy in Croatia in the spring of 1990, a handful of us started thinking about the Croatian Medical Journal and, by the beginning of 1991, decided to publish it. The first issue was scheduled for the beginning of 1992. We estimated that it would take about a year to make sound preparations, including strong Editorial and Advisory Boards, a network of reviewers, and journal marketing to attract potential authors and readers. We were ready far before the schedule, and looked forward to the first issue. Then, the savage war against Croatia was launched at a large scale, and we realized that our as yet unborn precious child had a much more important task than that initially conceived within the frame of the idea of the journal. The inconceivable aggression, and ever increasing ferocity and destructiveness of our enemies urged us to print an additional issue (most probably to be followed by yet another one or more, depending on the further development of the situation in Croatia). Since the overall concept of the CMJ had already been defined, the Editorial Board have decided this issue to be designated as a supplement to CMJ Vol. 33, 1992. The CMJ is actually a successor of the journal *Radovi Medicinskog fakulteta*

Zagrebu - Acta Facultatis Medicae Zagrabensis, Vol. 32, 1991. Thus, this War Supplement 1 has been printed and distributed in October 1991, several months before the first regular CMJ issue, scheduled for January 1992. This is certainly a rather original example, imposed by the present circumstances.

This supplement and those to follow will witness and document the medical data on the war against Croatia. At present, we offer data that were available during the first few months of the total war. The crimes committed by the enemies of Croatia against civilians, and those wounded and captured, the brutality with which they attack churches, schools, medical institutions, villages and cities, historical monuments and every facet of the foundations of the Croatian culture, identity and its very existence, is unprecedented in the contemporary history of our and, most probably, most of the nations of the world. Nevertheless, our investigations, data gathering and processing as well as descriptions and commentaries upon the unfortunate facts, will by no means be burdened by any national, political, racial or religious biases. *Errare humanum est*, but we promise our readers, those who do and do not sympathize with us, that we will above all follow the sacred rules of our medical profession. In this respect, we sincerely invite herewith those who may have arguments contesting our data, to publish them on these very pages. We also take this opportunity to thank all the members of the CMJ Advisory Board for having lent us their honorable names and put their trust in our decency, fairness and competency. We hope we will not disappoint them.

This issue contains more or less crude data we were able to collect and process under the present conditions. They are far from be-



ing complete, however, and represent only a small part of the total body of existing data on the medical aspects of the 1991 war against Croatia. In the following issues, we will try to document professionally all the material we manage to collect, as sound, fully documented and pertinent data. Unfortunately, a great deal of material and documentation will probably never be reached, because in many instances the Serbian terrorists and their ally, the Federal Army, did their best to prevent the police and medical officers in their legal investigations. One of the numerous examples is the crime against civilians, and the wounded and captured Croatian Police forces in the village of Dalj, which happened on August 1, 1991. Determined to rely on sound forensic data exclusively, in this issue we report on two cases only. However, from the witnesses' statements and the number of missing individuals from that region, it is safe to estimate that at least 300 victims will be found in common graves in the area when the Croatian Army liberates it from the enemy.

The leading article in this issue, a psychoanalytic disquisition written by Dr. E. Klain, should help readers less familiar with the situation in Croatia to better understand the background of the war. We have avoided to fully disclose some of the data (e.g., full names of the civilian victims) for the sake of ethical, political and security reasons. However, this data as well as all other relevant information on the subjects reported on in this issue of the journal, have been stored in our files and are available upon any legal request addressed to our Editorial Office.

We trust we will live to the times of peace, freedom, democracy, recovery and prosperity

that will provide the time, ways and brains to investigate and analyze unbelievable hatred towards our country and nation; presently, we can only hope that the atrocities and destructions done will be documented and the culprits captured, tried and disclosed to the public. We will do our best to make our contribution at this very place.

This Editorial was outlined on September 17, 1991, in the basement of the Zagreb School of Medicine, during the third air-raid of the day. However, we trust our first regular issue will appear as scheduled. There we will explain the aims, organization and purpose of the regular Croatian Medical Journal issues (four per year).

We should emphasize that many honorable women and men helped to the preparation of this War Supplement. They did it unselfishly and anonymously, yearning to do as much as possible for their homeland. Photographers, professional and amateur, took pictures under the danger of heavy artillery or sniping-rifle fire, chauffeurs brought the pictures driving on dangerous roads and train officers transferred the material free, without question, sincerely and faithfully, sensing the importance of their deeds. We thank all of them warmly. Also, some members of our Advisory and Editorial Boards did many things that were decisive for the quality and on-time publication of this War Supplement. Their names will not be listed but both we and they know the struggle and the effort bound with this issue.

Matko Marušić

Yugoslavia as a Group

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Abstract. This article is aimed at a psychoanalytic description and explanation of the background of the events that led to an unprecedented aggression against Croatia, a savage war burdened with destructions and atrocities unknown in the contemporary history of the Western world. Yugoslavia is described and analyzed from the standpoint of a group analyst. The description and analysis are applied to historical, political, national and military aspects of the Yugoslav contemporary events, i.e. the war against Croatia. With this respect, in addition to a psychoanalytic disquisition on extremely complicated national and political interactions in Yugoslavia, it should also serve as an appropriate introduction into the contents of this War Supplement 1.

Key words: *authoritarianism, destructive behavior, mass regression, nation, psychoanalysis, war*

A State as a Group

A state can be regarded as a huge group with very heterogeneous members and rich group dynamics. Therefore, stratification by various criteria is necessary in order to reduce heterogeneity or, in other words, to develop a certain degree of homogeneity. So, for instance, people in a state gather around religion, nation, province or territory. They search for their identity in belonging to a certain city, political party, sport association, professional organization, etc. They wish to belong to somebody, to be members of a large, medium or small group, to overcome, or at least reduce, their symbiotic needs and separation anxieties. They wish, then, to be part of something which will increase their self-esteem and their feeling of their own worthiness, at the same time reducing their fear, insecurity, loneliness, as well as their feelings of guilt and sense of worthlessness. As a group analyst, I have concentrated immediately on man - the individual, the elementary particle of a state. We are, after all, interested in a group as a unit and community which can either help or hurt a human being. Also, the group processes in large, me-

dium and small groups are of interest to us primarily because of the man - the individual.

The basic question we ask ourselves is how could a man identify with Yugoslavia as a group - a state, and integrate in it.

Yugoslavia has never been lucky since its beginnings. Created rather as a need and wish of foreign factors, i.e. great European countries, than as the need of people and nations who had populated it, since the beginning it was a group of very heterogeneous peoples pushed to live together.

Let me just remind you how difficult it is to form a small therapeutic group, although its members are people with a common aim, i.e. to be cured. How much knowledge and skill are necessary to overcome the resistances and hostilities among the members of the future group and to train the group for communication, interaction and participation (1). I am afraid that the only possibility to make very heterogeneous people to live together in a state is the use of authoritarian repression accompanied by an idealized or demonized figure of a supreme leader relying on a smaller group. This was the formula according to

which a large group of 20 million people, still called Yugoslavia, functioned.

From 1918 to 1941, the supreme authority was the Serbian king, which means that the repression was carried out by the police, and the power relied on the majority people. The remaining two large nations (two groups) in the state played a subordinate role, while other nations and ethnic minorities were denied as groups. The mutual rivalry of the three main groups caused acting out from time to time, while the repression established a false cohesion behind which the destructive aggression, accompanied by projection of the archaic instinct needs, was hidden. The denied groups, i.e. the unrecognized nations and ethnic minorities, felt excommunicated and looked for identification objects outside their state, i.e. the group which had rejected them. In such a destructive group dynamic situation, the best chances to succeed were on the side of the offer favoring those poor and degraded, that which promised an equal position to all the groups. That option offered, instead of the discredited religious and monarchic authorities, group leadership and humanistic ideals. This was Communism, an ideology which resulted in the most aggressive terror and which enthroned paranoia as a system.

The Yugoslavia just described disintegrated as a group in 1941 in only a week after the disappearance of its authority - the king and everything around him. The Second World War was an ideal opportunity to realize all the destructive aggressions suppressed in the Yugoslav groups since its formation. The paranoid projections became dominant, supported by the foreign groups, i.e. the warring European countries. The destructive cannibalistic needs of various ethnic groups disguised in projections (revenge) were realized. That which exists in us latently and under normal conditions is realized by psychotic patients only, did occur. A very thin shell of culture and civilization broke very soon (as Freud often put it)(2), and the groups clashed as if they were primal hordes; it was like realization of the destructive fantasies of a one-year-old child. The group superego manifested only within its aggressive and destructive components. The libidinal component of the loving superego was deeply repressed. According to Bion's basic assumptions, only the situation of fight developed (3). His descriptions of the destructive power of a group were realized. The consequences of such events in the groups were destroyed lives of people and broken families. Perhaps most important for the present day is the fact that the survived members of these groups have always remembered awful scenes of separation, such as the killing of their parents in front of their eyes or fierce dragging away a child from his mother when she was taken to the concentration camp. These frustrations also influenced the group memories about the aggression, realized by the "members of the other nation". Transmission of the feelings entailing from the war occurred within particular groups, leading to transgenerational

memories of the insults and destruction, the blame for which was laid upon the "enemy people". This is of utmost importance for understanding of the present day ethnic and other confrontations among various groups in Yugoslavia.

The end of the Second World War established the Communist resistance movement for several reasons. The Communists offered prosperity to the poor and the marginalized (using phrases about equality); suppression of the national feeling in the groups (nations) who had destroyed each other during the war in the archaic way and who now were afraid of the revenge; recognition of the by then denied nations and ethnic minorities. The Communists came out of the war with an aureole of the winner on the side of the Allies and with a charismatic leader who inspired a false feeling of security by transposing his grandiose self into large groups of the Yugoslav citizens.

But, the repetition compulsion appeared again in a new large group of this country, i.e. in the Federal Peoples' Republic of Yugoslavia. What was said about the group processes in the first Yugoslavia (1918-1941), was repeated in the second Yugoslavia (1945-?). The repressive authority of the tyrannical leader relied on two groups: members of the leading, i.e. the only party (somewhat less than ten percent of the population) directly and the leading Serbian nation indirectly, through the group which called itself the federal administration (1-1.5 percent of the population). The number of confronted groups increased in the new state, because new nations and ethnic minorities were accepted, thus further reducing the group cohesion and increasing the group tensions. The number of "enemy groups" suitable for the negative and the destructive to be projected into them also increased. The functioning of the confronted groups could only be achieved by an excellent organization of repressive forces in the form of two hierarchical groups: the police and the army, that were actually unified, i.e. conducted from one and the same center. A difference in the later organization and conducting of these groups resulted in different behavior of these groups in the war to come.

Differences in the Groups Constituting Yugoslavia

The charismatic leader, Josip Broz Tito (1892-1980), felt intuitively that heterogeneous groups could only be kept together if they, and primarily their leaders, be given important positions in the country. Strengthening the leaders' narcissism and creating the narcissistic group self, he gave them an illusion of power. He increased his authority by saving all the Yugoslav groups and their leaders from Stalin's occupation, i.e. destroying the personification of all the destructive instincts. Three protective groups of the regime - police, army and federal administration (the bodies of the Communist Party and the state bureauc-

racy), succeeded in keeping the group tensions suppressed. Each attempt by any smaller group to oppose the group authority (elements of democracy) to the authority of the ruler was quelled, especially if the groups emphasized the leaders' names. So, for instance, the names of the leaders could be read on the signs, or were shouted by large group at public meetings. The archaic narcissism of the ruler could not stand any name but his own. He himself and his closest group offered a quasi-democratic group approach, which in this context meant only confusion and disintegration of the group. This was the so-called self-management, which broke down completely. In order to understand the processes that brought about the present decompensation of the state, it is necessary to describe the basic groups of which Yugoslavia is composed. We consider as very relevant the groups whose common characteristic is the nationality. In all crisis situations in Yugoslavia, the groups used to gather around the symbols of nation and religion (very often synonyms in these peoples).

The Serbs

The Serbs are the majority people who ruled the country, in the first Yugoslavia directly, in the second Yugoslavia indirectly (through the bodies of the Communist Party and the federal state). They are known for their militant tradition which has been transmitted from one generation to the other. Elderly members of the family tell stories about Serbian heroes of the past to the younger ones. The cult of warriors and military leaders has been cherished. The group cohesion is formed around a leader-warrior (king, duke, Tito-marshal, etc), and less around the Church and religion, although the Orthodox Church is autochthonous (Serbian Orthodox Church). The Church is a cohesive factor rather as part of the national identity and less as a religious symbol. It is known that the Orthodox Churches are independent and national, i.e. they have the so-called autocephalousness. The Serbs as a group have considered themselves the leading nation in Yugoslavia because they are "the strongest and because they founded Yugoslavia". Idealization concerning external groups is first of all connected with the USSR and France (the latter was the cultural cradle of the Russian czars). In relation to the national groups in the western part of the country, the Serbs often have the complex of inferiority, because they are aware of their lower level of civilization and culture. They try to get rid of that feeling by means of various defense mechanisms, such as negation, projections, denial, ambivalence, but in any case the destructive component is very often present.

The Croats

The Croats are the nation which is the Serbs' greatest rival. Due to very different external and internal influences upon the development of this group, they have built their own cohesiveness based on labor, dialogue, obedience, expectance of understanding and justice. Their religious ide-

alizations are more pronounced than in Serbs, which is certainly related to the feeling of belonging to the Western cultural circles, i.e. the Roman Catholic Church and the Pope. Therefore, they accepted authorities outside their national group more easily and developed dependency on them. In the Croats, the group regression is closer to the depressive position in the development of a personality, which is characterized by the feeling of guilt which, among other things, manifests in their need to pray to God. In Serbs, the group regression is more frequently at the level of the schizoparanoic position in the development of a personality, accompanied by complete destructiveness and irrationality brought along by this phase. Therefore, the Communist ideology based on the splitting and paranoid projections is closer to this group.

The Slovenes

The Slovenes, the third nation-building people in the first Yugoslavia, have as a group always been a little out of the interactions. Very homogeneous as a national group, they had rather great benefits from permanent confrontations of the opposing groups, Serbs and Croats. Thus, they could develop as a group quite undisturbed. They succeeded to reach more mature interactions developing the dialogue without any great need of authoritarian leaders (more about this, see below in the analysis of the war in Slovenia). They succeeded to integrate the Catholic Church into their group concept at a more mature level. So, for instance, if we compare the Slovenes and the Croats during the last year, we can see a difference in their need of emphasizing the religious and national symbols accompanied by national euphoria. As distinguished from the Croats, the Slovenes had no need for coats of arms and flags or frequent cardinal masses and processions in order to create their group identity, thus proving that regressive processes are less marked in their group. Having a more mature group identity, the Slovenes do not need any charismatic group leaders. They are able to use in a more mature way their group self in realizing the needs of the whole group, and not the needs of a charismatic leader.

The Macedonians

The Macedonians as a nation were accepted in the second Yugoslavia. As a group, they are in an ambivalent way linked with the Bulgarians, Greeks and Albanians. In the interaction with these neighboring peoples, they try to prove their identity as a nation which has been denied by the mentioned countries. As the group of Macedonians consists of heterogeneous subjects, their group cohesion is rather loose. On the other side, like any newly formed group, they have a need to idealize their group identity.

The Montenegrins

The Montenegrins were given their mini-republic in the second Yugoslavia, although they

had existed as a nation-building people for already ten centuries. Historically, they are connected with Russia, into which they project the libidinal parts of their group self. As a group, they are split into two subgroups - some feel as Montenegrins, some as Serbs. They are brought up on extremely heroic-militant traditions. They possess libidinal and rigid superego, which manifests as pride and honesty. As a people, they are quite poor and have a rather low cultural and civilization level, in spite of their royal tradition.

The Bosnians

The Bosnians are an undistinguished ethnic group living in the Republic of Bosnia and Herzegovina, together with the groups of Serbs and Croats. As a nation, they were recognized only in the second Yugoslavia, but were equated with the believers of the Islamic religion, i.e. the Muslims. They like to call themselves Bosniacs, which term bears an ethnic rather than (only) religious connotation. This subgroup is the majority of population in Bosnia and they differ socio-culturally from the Croatian and Serbian subgroups. They are very traditional and conservative, with the father's authority being sacrosanct to them. They live in large families in which sexual differentiation is marked by the sense of an absolute predominance of the male.

The Albanians

The Albanians are the majority people in the former Kosovo Autonomous Province, annexed by the Republic of Serbia in 1990. As mentioned above, a large group of Albanians live in Macedonia. Most of them are brought up on the Islamic tradition, their cultural and civilization level being very low. At present, they are exposed to the destructive genocidal acts by the Communist Serbian government.

Others

There are many other national minorities in Yugoslavia, but those mentioned above provide an insight into the group chart of Yugoslavia, which consists of numerous national and religious groups, all mixed up and opposed to each other. These are the groups of different and mutually distant socio-cultures and influences (the Islamic countries, Turkey, Greece, Bulgaria, Albania, but also Hungary, Austria, Germany, Italy, France, Great Britain, USA, USSR, etc.).

The described conglomerate of very heterogeneous groups, formed on the basis of different external and internal influences, had scarce homogenizing factors but much of the confronting and destructive in its structure. That is why this conglomerate began to disintegrate quite spontaneously, under certain favorable conditions.

The Group Dynamic Context of The Communist Yugoslavia Disintegration

In the '70s, a dynamic balance existed among the groups in Yugoslavia. Foreign credits provided

economic stability and welfare, and almost total employment. If this group situation is considered in the light of Bion's basic assumptions, it can be defined as a question of the basic assumption of dependency (3). There was a leader who took care of everything and, which is most important, procured financial means. The members of the group felt as if they took part in the governmental affairs, which means that they had some power through self-managing bodies. Such a situation was completely false, but in many people it satisfied their narcissistic needs, especially in more simply structured personalities. In this way, the members of the groups projected libidinally in the great seemingly stability-providing leader-father, and aggressively in small local leaders who used the system for private profiteering. This split into the aggressive and the libidinal, this distribution to good and bad leaders as to good and bad breasts, helped in maintaining a dynamic group balance. Most of the members of these large groups were not aware of very serious economic and political realities. They were protected by idealization and projection, which is otherwise often seen in large groups (4). This balance was disrupted in 1980 by the death of the great leader. His cult continued through numerous rituals, beginning with a great show at his funeral, followed by pilgrimages to his tomb, establishing of his museum, etc. A large number of people needed all this for the mourning process, which lasted rather long. However, the space for idealization narrowed with time. The illusion of a good giving breast began to collapse. Economic difficulties appeared and variously organized groups began to split. The weakest link, i.e. the Communist Party of Yugoslavia, was the first to break down. This process was supported by dissolution of the Soviet Union. Rigid rules of the Communist Party hierarchical organization deteriorated, the group lost its clear boundaries, and the subgroups formed, confronting one another. Simultaneously with the split within the Communist Party, the large group - the state - split into the subgroups as well. This process was slower and is still under way, resulting in the war launched by representatives of one political idea against the other.

As the state disintegration was accompanied by disintegration of the Communist Party, we shall follow the course of events in the groups of Communists.

Communists

The Communist Party was basically divided into two subgroups, one consisting of the members of the Communist Party in the north-western republics of Slovenia and Croatia, and the other consisting of the Communists in the rest of Yugoslavia. The latter subgroup, the root of which was Serbia, incorporated the small Montenegro and the two autonomous Serbian provinces, Voivodina and Kosovo. Bosnia and Herzegovina (constituted of Serbs, Croats and Bosnians-Muslims) and Macedonia with its population, Macedonians and

Albanians, have an ambivalent relationship with the two subgroups mentioned above. The group formed of Bosnia and Herzegovina and Macedonia are closer to Serbia by their socio-culture, but existentially afraid of it, afraid of being swallowed. Thus, the Communist Party has definitely disintegrated, and the fate of its members is connected with the group process in individual republics.

The state proclaims, at least formally, democratic elections and a multiparty system, which results in varying degrees of confusion in the groups brought up on the paternalist principles of Communism, and now they have an opportunity to decide for themselves. The groups can hardly endure disorganization, confusion and the loss of structure, and they try to organize and structurize spontaneously. At the present moment (1989-1990), it is difficult to find some point around which the different groups in Yugoslavia might homogenize. It is easier to find something they all will be against. This is Communism. A great number of political parties appears, propagating anti-Communism. In a way, this is the devouring during the totemic meal of the father who left them without offering them some fixation or referential point of support. In four republics, the anti-Communist movements or coalitions win, while in Serbia and Montenegro the Communists win. This will be analyzed below.

The group processes just described took one decade to develop. Why so long? There must have been numerous reasons for that, but let us try to say something about those referring to the group dynamics:

1. Cohesive influence of the groups carrying out the repression: Regardless of gradual disintegration of these groups, they had, and still tend to impose, a cohesive power over Yugoslavia as a group. At the present moment, the strongest of them are the army and the federal state administration, while the police is distributed in the republics thus losing its cohesive characteristics, and the Communist Party disintegrated as described. The power and the strength of the federal administration are masked and suppressed, but actually very important. All authoritarian and centralized states rely to a large degree on their administration or bureaucracy realizing the government's requirements, but in the course of the group processes the interaction with other groups is being unperceivably transformed into a group of power and decision making. It is still one of very powerful cohesive groups who would not allow Yugoslavia to disband. The power of the small group, the federal government, is greatly reduced, but not so as that of the federal administration. This powerful group mostly consists of the Serbs, partly due to the geographical factor, because all federal institutions are in Belgrade, a capital of both Yugoslavia and Serbia, its citizens being mostly of the Serbian nationality. Similar is the composition of that part of the federal administration interacting with other countries, i.e. the diplomacy. The vital interest of this group is that nothing

be essentially changed in Yugoslavia, that Yugoslavia as both a state and as a group undergoes no changes at all. The authoritarian and centralized Yugoslavia offers the members of this group power, social security and profitable employments.

Another, perhaps even more important, cohesive factor is the Yugoslav National Army, which will be analyzed in more detail in the section on the war waged in Yugoslavia.

2. Forcible annexation of Montenegro, Kosovo and Voivodina by Serbia: Serbia is the greatest republic which had the power in both the first and second Yugoslavia. This feeling of authority was kept in this group, arousing expectations that this would go on in the future too. When the leaders of this group understood that their expectations were unrealistic and that great changes occurred in the relations among the groups-republics, they felt endangered. They developed paranoid projections toward all other groups in Yugoslavia, assuming that their only aim was to destroy Serbia. Then, they started the war. In Montenegro and Voivodina, they carried out a successful putsch without bloodshed, while the conquest of Kosovo took numerous victims. Ninety percent of the population in Kosovo are Albanians, about ten percent Serbs. To conquer Kosovo, the Serbs used the federal police and the army. The military-police terror in this territory is still in deed. Kosovo serves as an example for Yugoslavia as a whole how to keep in submission ninety percent of the population of a region by means of the military-police terror. This example, i.e. fear from a similar fate, represents a "strong cohesive factor" to all other groups in Yugoslavia.

3. Communist education and training of the group leaders: A great majority of the present political leaders in Yugoslavia are people brought up in the authoritative groups of the Communist regime, who have accepted the models of thinking and communication offered by that regime. Their wishes and needs to realize real democracy and freedom today clash within their personalities with their unconscious needs to rule authoritatively and be backed by an obedient group. Rationally and consciously, they do not want to be authoritative leaders, because they know that such persons cannot create a free and democratic society. But their unconsciousness and their emotional needs offer an authoritarian model. Not only the leaders, but all members of the groups, are experiencing the same intrapsychic and interpersonal conflict, because they were all brought up and educated in the Communist authoritarianism.

The Yugoslav National Army (Federal Army)

The Yugoslav Army was born during the Second World War by means of identification with the Red Army and projection onto Hitler's occupation. The resistance movement of a guerilla character, the so-called partisans, was led by the Communist Party. It represented an organized group who developed idealization of the Soviet Russia and its leader, Stalin. Because of its organi-

zation and feelings of belonging to the world Communist movement, the partisan army had the opportunity to live as a group. Its libidinal component toward the "great nation and the great leader" who offered protection and security, was accompanied by the aggressive component toward the enemy occupying the country, into whom fear from destruction and hate were projected. These projections generated fear associated with the idealization just described. Both fear and idealization have a cohesive component (5). Thus, the Communists succeeded to transform small groups of guerilla fighters, some of which had no firm organization or clear goal (except for saving their own lives), into a group with firm hierarchical structure which functioned for years as a well organized and authoritatively conducted group. It is interesting to analyze the way it achieved a high degree of cohesiveness in spite of having been led in two directions. This group can be compared with a psychotherapeutic group conducted by two co-therapists with different aims. Such a therapeutic group would fall apart soon, but the group analyzed (the Army) have not yet fallen apart. During the war, power in the army was divided between a commander (smaller unit) or a commanding officer (larger unit) and a political commissioner. A commanding officer was in charge of war operations, whereas political commissioner was responsible for ideological-political education of the members of the group, i.e. the unit. A hypothesis can be set that two leaders with different tasks and goals provoke a split in the group members projections. This is, of course, a regressive phenomenon and can be related to the need of dependence. How a group with such a structure succeeds to maintain its homogeneity, remains without answer for the present moment. However, practice showed that more often the fighters projected their libidinal feelings into their commanding officer, and their aggressive and paranoid feelings into the political commissioner. They liked their commanding officer, and feared the commissioner. It is known that in some units there were conflicts between the commanding officer and the commissioner, primarily referring to their needs of domination in the group, and occasionally their conflicts related to the priority in realization of the military or political goals. Hierarchically superior structures regularly protected and supported the political commissioner, which further strengthened the subgroup within the military unit consisting of members of the Communist Party. Thus, the above described projections of fear and persecution in relation to the political commissioner were even more intensified. A similar polarization is found in religious groups where there is also a split: love for God, fear and hate of the devil; the principle of the good and the evil or life and death (*eros* and *thanatos*, according to Freud) (6).

How does the Army function as a group?

Speaking of the Church and the army as two structurized hierarchical groups, among other

things Freud said: "The Commander-in-Chief is a father who loves all soldiers equally, and for that reason they are comrades among themselves. The army differs structurally from the Church in being built up of a series of such groups. Every captain is, as it were, the Commander-in-Chief and the father of his company, and so is every non-commissioned officer of his section. It is true that a similar hierarchy has been constructed in the Church, but it does not play the same part in it economically; for more knowledge and care about individuals may be attributed to Christ than to a human Commander-in-Chief" (7).

This means that soldiers are brothers, because their chief (officer) loves them all equally. Therefore, they love each other. There is a double libidinal tie: officer-soldier and soldier-soldier. In the Yugoslav Army, we can see that the connections among soldiers or between soldiers and officers continue long after their actual separation. They become friends, visit each other, from time to time meet as a group, etc. On the basis of all this, it is obvious that intense emotional ties are formed, leading to separation difficulties, probably further intensified by a latent homosexual component, usually present in such unisexual groups.

Each army is formed, maintained and developed because of the enemy. The Yugoslav Army developed after the Second World War, primarily as a group protecting the Communist regime from an "inner enemy", i.e. those opposing Communism, and only then from "external enemies", i.e. the capitalist countries. Education carried out during the war by the political commissioners began to bring results after the war. Political commissioners, who figured as group therapists in a way, developed blind obedience in relation to the authority and at the same time poor tolerance of all other ways of thinking in the groups of soldiers (military units). In 1921, Freud emphasized that a phenomenon of amplification of emotions appears in such authoritarian and hierarchical groups, so that antipathy turns into great hate and submission into blind obedience (7). We should add that suggestibility is a phenomenon rapidly developing in the groups and contributing to the development of hate and obedience. In this way, the Communist Yugoslav Army has developed into both a modern armed power and ideologically indoctrinated group. Its supreme commanding officer united both a figure of an emperor (which he showed even by his appearance) and a figure of a politician who became very popular in the poor countries of Asia, Africa and Latin America. Such a picture of the chief commanding officer facilitated the development of idealization in each soldier and officer, together with the necessary identification with the group, i.e. the Army. For quite a long time after Tito's death in 1980, his cult was present and is still present in the Army to a certain degree.

The Army is composed of regular units, officers and non-commissioned officers (now called junior officers), and soldiers who serve their regu-

lar military service and later form the reserve army. The regular army is a permanent military group presenting the leading structure of the army. As a guardian of the regime, the Yugoslav Army has considerable material privileges that have made the life more comfortable and easier for officers and their families as compared to other groups of the population. At the same time, this situation has made difficult the integration of the group of officers and their families into various groups of the "civil population", because they aroused their envy and jealousy. Frequent moving of the officers' families from one region to another made it difficult for them to communicate with other groups. All this resulted in their even greater isolation. Therefore, the officers families were forced to form homogeneous groups and get out from the influences of those around them. This is another reason for the Communist ideology having become an integral part of their lives and way of thinking. The mentioned transfers often resulted in serious separation problems in officers' children, because they had to change the groups of play- and schoolmates. These children frequently experience psychic disturbances later in life, as we know well from our psychotherapeutic practice. The officers and their families, as unaccepted strangers, develop various defenses, especially narcissism frequently accompanied by rage and aggression. In individual histories of some officers, we find severe scenes of destructive separation during the war, for instance, killing of parents in their presence, forceful separation of family members to be taken to prison camps, sudden learning of having been raised in strange families or childrens homes, etc. Some of these people succeeded to sublimate the early psychic traumas, while some of them repressed these early memories that can be, as we know, reactivated under favorable circumstances, such as a war or a threatening change of the political system, etc. On the other hand, such experience from childhood can be part of the unconscious motivation for choosing the military vocation.

The unproportional national structure of the officers is connected with the military traditions (Serbs and Montenegrins), bad material situation (south-eastern countries: south Serbia, Macedonia, Kosovo and Montenegro) and a greater need of the authority, which is more often seen in simple socio-cultures (south-east of the country). An interesting observation is that between the two hierarchically organized groups (the Church and the Army) that offered free schooling, poor Serbs and poor Croats preferred the Army and the Church, respectively. Now, we can better understand why the officers who make the structure of a military group, together with the federal administration, are the most violent protectors and defenders of the Communist system within the authoritarian and unitarian Yugoslavia. Let me repeat: they constitute, together with their families, the group of unaccepted strangers, they are afraid of the repetition of severe separation traumas from the

Second World War, and they want to keep their privileged position in the society. Most of them belong to the "leading" and most numerous nation. Therefore, it is understandable that for the greatest number of the members of the group of officers, democracy as an order is unacceptable and frightening. This even applies to those who were educated in the West European countries and USA, but not as much as to those educated in the Soviet Union. They are also afraid of any possibility of the federation disintegration, because this is a threat to the authority and hierarchy providing both safe existence and psychic balance to this group of people.

The War in Slovenia: June 27 - July 2, 1991

The four-day war in Slovenia between the Federal Army and the Slovene people certainly had many political, economic, military and other causes. As a lay person, I would not try to analyze them, but will try to analyze this unusual war from the aspect of group-dynamic processes. The external reason was the proclamation of independence of the Republic of Slovenia and taking over the crossings on the Yugoslav border by the Slovene government. The federal government was said to have ordered the Army to secure the frontier, but there are doubts that the Army itself made such a decision.

It seems logical that the Federal Army reacted with force to the Slovenia's attempt to become independent. That democratic act represents a threat to the officers and arouses in them fear from destruction, because breakdown of the Communism (which has already happened but they cannot accept it) and of the federal state is a complete disaster for them. Tanks moved in the direction of the border crossings and the Slovenes defended themselves in an organized and disciplined manner. At the same time, they waged a well organized mass-media war, using the most powerful medium, i.e. television. The Federal Army war operations were mostly performed without direct human confrontation (tanks and war-planes), and yet the ambivalence in the group of soldiers in the military service did appear: to shoot at their own people or not? The army group split - many soldiers surrendered or deserted to the Slovene territorial defense, some officers did the same. The Slovene government called the Army occupying, which further increased the split in the Army group. After four days of the war, the Army collapsed.

How did the Slovene group conquer the modern Yugoslav Army? As a group, the Slovenes are homogeneous, hard-working and well organized. For quite a time, democratic processes have been running in this group, and group communications and interactions have been cherished. The small group in which their leadership works, has no need to single out an authoritarian leader. They are able to lead a dialogue and listen to opposite

opinions. Another of their cohesive factors is their common feeling of being exploited by others in the federation (which is true). The group leadership and psychology of a mature group defeated the authoritarian hierarchical group, which fell apart soon after its members (the soldiers) began to feel that they were not liked by their leaders any more. That is, their commanding officers began to classify and differentiate them according to their nationality, which resulted, along with many other factors, in disintegration of the group of soldiers.

Another group phenomenon, known from Argentina, i.e. mothers of the victims, appeared in this war. Gatherings of the soldiers' mothers were massive. They required their sons to be let home. Little success of that action is due, among other things, to the great heterogeneity of the group of mothers. The only thing they had in common was the fact that their sons were in the Army. The organization of that group and chances for its life were also disturbed by an irrational component of "private" fear of each mother for her own child, which made the group communications difficult.

The War in Croatia: August 1990 - ?

In the multinational and multiconfessional as well as socio-culturally very diversified state of Yugoslavia, there is a large number of groups with hardly any links but many things that separate them. Although the history of Yugoslavia has witnessed constant dynamic changes in the relations among the groups, e.g., smaller groups united into larger, various alliances and coalitions were forming and falling apart, points of confrontation between the groups changed. Nevertheless, the most important relationship was a dynamic relationship between the two most numerous nations, Serbs and Croats. Serbs were, as mentioned above, brought up in a military tradition based on myths about heroism, as the best and strongest, as the leading people in Yugoslavia, which they identified, sometimes consciously, sometimes unconsciously, with Serbia. They regarded as an honor to be a member of the military or police group, a uniform and the arms were symbols of maleness for them. On the other hand, Croats as a group cultivated feelings of subordination and underestimation. Since 1918, they have felt exploited by the Serbs in Yugoslavia. The Second World War and the Communist era contributed to the development of the described feelings and the accompanying psychodynamics in these two groups.

It is interesting to emphasize that in the Second World War, on the territory of Yugoslavia extreme groups of Serbs and Croats were formed, the so-called Chetniks and Ustashas, who physically exterminated the members of the "opposing" people without any rational motive. The archaic destructiveness, which is always accompanied by irrationality, was present in the actions of the extreme groups of both peoples. They treated the members of the "opposing" people as some primi-

tive tribe, and as a basis they used the destructive projections of paranoid contents (they had to defend themselves, otherwise they would be tortured, destroyed, cannibalistically massacred, etc.). These irrational fears, together with the paranoid projections, spread in the group with great strength and very rapidly, and led to mass reactions in terms of Bion's basic assumption of flight-flight. There were, unfortunately, many casualties on both sides. However, I think that the most harmful consequence of these group manifestations of the archaic instincts is the subsequent interpretation of these events. After the war, the groups satisfied their needs of repeated stories about the war events, which had enormous impact on education and the whole emotional development of the postwar generations, which will be discussed in greater detail below. After the war, the Communist propaganda succeeded in presenting the situation as if the Ustashas (extreme Croats) killed innocent Serbian people in large numbers, while having different, much more lenient attitude toward the Chetniks (extreme Serbs), especially so in recent years. Thus, the victims on the Serbian side were actually augmented by 10-100 times. In fact, all those opposing the official politics of the time were systematically exterminated, not only Serbs but also representatives of all other nations, including Muslims, Croats, etc. The two extreme groups did the same destructive job, only the Croats should have been ashamed because of that and the Serbs should have been almost proud. Throughout the postwar period, any investigations of the causes and severity of the crimes, in which both the Croats and the Serbs were involved as nations, and the Ustashas, Chetniks and Communists as political factors, were systematically prevented. Thus, incomplete investigations and stories have contributed to the memories of crimes to be preserved and, released by the new democratic processes, burst out with full strength. For better understanding of the group psychology of these two peoples, it should be mentioned that after the Second World War the Serbs in Croatia, where they make 12% of the population, held the leading positions in the government business as well as in the Communist Party. So, for instance, president of the Communist Party of Croatia almost always was a Serb. On the other side, the Croats in Voivodina, which is a part of Serbia, have never held any leading position.

By his authoritarian behavior, Josip Broz Tito held under control the resistances in the national groups. When reactions in the form of acting out did appear, he used to give some small concessions that temporarily reduced the tensions and resistances in that group. When the Communist rule broke down, as analyzed above, Yugoslavia as a group disintegrated in a certain sense. In the process of disintegration, which is still in progress, the group of Serbs and the group of Croats act in two different ways again. In Serbia, the Communist regime is still in power, somewhat modified, and the Communist Party gets the majority in the

parliamentary elections. Surprising results of the elections in Serbia are difficult to explain psychodynamically. However, we can say that a certain influence on such issue in Serbia was exerted by group processes in the late '80s. One charismatic leader (Josip Broz) was substituted by another (Slobodan Milošević) who offered them the narcissistic omnipotence (they are most capable, their historical heroes are the greatest, their God is the best, etc), and a complete protection from all enemy groups (Croats, Albanians, Bulgarians, Muslims, etc) in a totally regressive-paternalistic way, e.g., through the declarations: "nobody should beat this people", "we will arrest the enemies", etc. This archaic speech met with resonance in many members of the Serbian group. Fears from other groups in Yugoslavia, imposed by the great leader, as well as fear from any change or new, unknown situations, were also cohesive factors that gathered them around the Communists.

In Croatia, the group processes seem to be different, but still show some similarities. The Communism was defeated in the elections. The party which won in the elections, united their numerous members by a clearly declared nation-building idea, i.e. the concept of sovereign Croatia, free to choose by itself the countries with which it will, and under what conditions, form an alliance, or will proceed toward full independency. Official statements and documents issued by the party guaranteed all the civil and political rights to the Serbs (and all other minorities in Croatia), thereby inviting them to parliamentary negotiations.

The realization of this concept revealed certain varieties of the approach, thus the basic standpoints were explained both moderately and radically. Those more extreme statements were used by the Serbian official politics, supported by some representatives of the Serbian people in Croatia, to redirect the Serbs in Croatia from the parliamentary struggle toward armed fight. We should not forget that the leaders of the group that won the elections superiorly (the Croatian Democratic Union) were mostly former Communist leaders brought up in that regime which, when they rebelled against it, expelled and sentenced them. Imprisonment helped them to develop a strategy of fight against the Communism in groups, but they were not able to confront the invisible Communist in themselves. And, here is the great similarity with the Serbian leading group. Authoritarian behavior of the Croatian leading group is somewhat less expressed in comparison with the Serbian ones, because it is attenuated by freer and loud opposing group and media who partly tore the governmental control off. However, the parliamentary elections in Croatia did succeed to realize considerable democratic freedom. Another very important similarity between the Serbian and Croatian leading groups is their charismatic leaders. The authoritative personality with his military education and origin similar to that of the great leader Josip Broz Tito (Dr Franjo

Tudman) proclaims democracy. The small group around the ruler is entirely dependent on the leader, having little chances to grow up. It seems as if the electoral victory brought about an oceanic feeling of carelessness and satisfaction in this small group, but it did not last long, because they were soon faced with enemy groups from their environment. Awoked from a nice dream, as a group they react aggressively and regressively, not allowing anyone to oppose them, thus enlarging resistance and hostility in other groups, especially in the group of Serbs in Croatia, who actually had for years been persistently indoctrinated through cunning propaganda directed from Belgrade. The development of the group dynamics described presents a group-dynamic frame in which the war for Croatia began between the Serbs and Croats; between the Communism and advancing democracy; between Serbia as a state, Serbs in Croatia and the Federal Army on one side, and the Croatian government and people on the other. An irrational and deeply regressive war has been waged between several groups led by hate, fear and paranoid projections.

How did the war begin?

In the middle of August 1990, at the height of the tourist season, the Serbs in Knin (a small town in Croatia) proclaimed themselves endangered by the Croatian police and set barricades on roads, thus stopping the traffic. This reaction evoked fear in foreign tourists on the Adriatic coast and they fled in panic. Where did this fear in the Serbs come from? The anxiety was caused by frightening intentionally spread by their own leaders, who told them horrible stories about the policemen already on the way to torture and kill them. These frightening stories fell to a fertile soil in Serbs, because they reactivated the Second World War memories in the elderly, and stories about war sufferings in the young people. They thought they were going to be faced with destructive separations again. Barricades may have also had some symbolic meaning, e.g., the need of isolation, encapsulation, autism and rejection of everything coming from the outside, although they actually were primarily aimed at interruption of communications and destruction of the Croatian tourism and economy in general. Who were the barricade defenders? This group consisted of several subgroups. Some of their members came from the uneducated and poor part of the population, marginalized in their environment. Barricades were their only chance to come out from the anonymity and satisfy their long suppressed narcissistic needs of power. Some were insecure persons with the need of group identity and feeling of belonging to a group. Some were delinquent personalities, mostly robbers. There also were those who were forced to defend the barricades, because they were afraid of the reprisal or the possibility of being announced as traitors. As due to international and other factors, these groups were not met by adequate resistance by the Croatian government, they

began to expand their territory. Finally, initial clashes with the Croatian police, required for the Federal Army to intervene, were staged. In parallel with breaking off the road and railway communications, the communications between the conflicting groups also broke off, and so did negotiations and agreements between the group of Serbian rebels in Croatia and the Croatian government. This interruption of communications between the conflicting groups was provoked by the group of Serbian extremists who came from Serbia and took over the leadership in the resistance movement.

Spreading of the war conflagration

The aggression increases and develops out of conscious and unconscious motives. The two opposing sides here are the Communist ideology of the state of Serbia and the new democratic ideology of the state of Croatia. Serbia has territorial ambitions that can most simply be expressed by the formula "either Yugoslavia under our power or a great part of the Croatian territory annexed to Serbia". The fight is carried on between the Serbs and Serbia and extremist Serbs from Croatia supported by the Federal Army on one side, and the Croatian police and National Guard on the other. Who suffers most is the group of rural population of both the Croatian and Serbian nationalities who do not participate actively in the war.

The question is where the roots of this war are, or why did the rebellion of the Serbs in Croatia break out so easily. Another question is how it was possible that the groups of Serbs and Croats clashed in this way, resulting in such a destructive war. The groups in question have been living together and communicating very successfully. How did their leaders succeed to arouse, so quickly and easily, so much hatred and aggressive projections in them? The Communist repression suppressed for years the national feelings in the Serbian, and even more in the Croatian group. Repression brought along the resistance which, in the situation of the offered democratic freedom, burst like a volcano. The national feeling of the majority group in Croatia ran like lava over Croatia, the Serbs in Croatia were predisposed to be frightened by it and provoked a group response and an acting out. So, a chain reaction of mutual aggression was established. Serbia uses it and directs the aggression of the Serbs from Croatia into a conquering war. It is quite understandable that the Yugoslav Army helps the Serbian groups. There are numerous reasons for that: the officers are mostly Serbs; the Communist ideology (and this is their ideology) is fighting with the Western liberal democracy in this war, which is a direct threat to the Army structured in such a way. The Federal Army group has developed a feeling of being insulted because of the defeat in Slovenia. Therefore, this group uses the defense mechanism of shifting, in this case, the aggression from Slovenia to Croatia. Serbian groups fight, at least declara-

tively, for the unity of Yugoslavia, which represents an identification object for the military group. We have already seen that the Army is not a too homogeneous group. It began to split into smaller groups that started to act autonomously, which may be favorable or unfavorable for Croatia, depending on the emotional investment of the small group leader. Such investments may be more libidinal or more aggressive, and they depend on his former group experience, characteristics of his personality, his present position and emotions in his group (unit).

At the end of the first year of the war, the destruction became generalized. The members of the warring powers are killed en masse. Civilians as well as medical personnel and journalists are also killed by Serbian and Army forces. The wounded persons are tortured and dead bodies massacred. How can such manifestations of destructive aggression of the archaic type, found in primitive peoples (the Afghanists in relation to the Russians, the Iraqis in Kuwait, the African tribes, etc) be explained? It is well known that some of the leading realizers of the destructions of such an archaic type had experienced severe traumatic separation in their childhood (killing of parents in their presence, etc). Some of them listened for years to bloody war stories told by their parents and other family members. Such stories are always colored with national hatred. The persons who perform such acts must have had more psychic traumas in their lives. Also, which is very important, the group must stimulate them to behave like that. However, this analysis can only partly explain the behavioral patterns that correspond to the most aggressive fantasies of a child in the schizoparanoic position and of a schizophrenic patient in the acute psychotic state.

Conclusion

It is difficult to grasp the group dynamics of a very large group in which many large, medium and small groups that confront, merge and disintegrate, are boiling as in a huge kettle. It is especially difficult to analyze such a group at the moment of boiling and eruption of massive aggressions and projections, the more so as the observer himself, i.e. the analyzer, is also in and is being boiled together with them. Numerous external factors also have an impact on the group dynamics of these groups: political, socio-cultural, historical, economic, intergovernmental (first of all Europe, but the USA too), that are in constant interaction with the inner dynamics in the groups having constituted Yugoslavia. Analyzing the interactions in these groups, it is difficult to fully comprehend the depth of the regression and the archaic destruction dominating in the relationships in the here and now situation (8). The offered ideas about the causes of the events in these groups are not satisfying, but they are stimulative for further investigation. At the end, let me say that as a group analyst, I do not feel comfortable in this situation. Al-

though I have a need to help, deep in myself I feel helpless. Perhaps I feel better because the ruling groups do not ask anything from us, group analysts.

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Chronology of Civilian Suffering in the War against Croatia

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Abstract. Civilian casualties in the war against Croatia during the period from August 18, 1990 to October 10, 1991, are chronologically presented, with initials and age of the victims (where available), and place and weapons indicated. Up to October 10, 1991, the total number of the wounded was 4788 and of the dead 807 (1603 and 350 civilians, respectively). The destruction of medical institutions and attacks on medical personnel are also chronologically presented.

Key words: casualties, chronology, civilians, Croatia, war

This report is concerned only with civilian casualties and the destruction of civilian targets. The data presented are not TOTAL numbers of civilian casualties for the described period, but only those appropriately checked and filed. All information (personal data, hospital and autopsy records) is available at the Medical Corps Headquarters of the Republic of Croatia.

Total and Civilian Casualties in Croatia: August 18, 1990 - October 10, 1991.

According to official statistics of the Ministry of Interior Affairs and Medical Corps Headquarters of the Republic of Croatia, the cumulative number of casualties in Croatia from August 18, 1990 to July 7, 1991 (the date of Brioni Cease-Fire Treaty) were: 149 dead and 392 wounded (35 and 117 civilians, respectively). A month and a half later, on August 25, 1991, the number of casualties doubled: 255 dead and 814 wounded (76 and 285

civilians, respectively). The second Cease-Fire Treaty was signed by all Yugoslav Republics on September 1, 1991. Immediately after the Treaty, Yugoslav Federal Army (YFA) attacked the civilian targets all over Croatia, so that the casualty toll on September 4, 1991 was 382 dead and 1743 wounded (148 and 658 civilians, respectively). After another Cease-Fire Agreement between the president of Croatia, Dr. Franjo Tuđman, the president of Serbia, Slobodan Milošević, and commander of the Yugoslav Federal Army, Gen. Veljko Kadijević, in Igalo on September 17, 1991, the attacks of YFA and Serbian irregular troops intensified, so that the number of total and civilian casualties rapidly increased (Fig. 1). Yet another Cease-Fire agreement between the three sides on September 26, 1991 was breached by YFA so that the total number of casualties on October 1, 1991 was: 3641 wounded and 624 dead (1245 and 270 civilians, respectively). After the last The Hague Conference on October 4, 1991, the number of

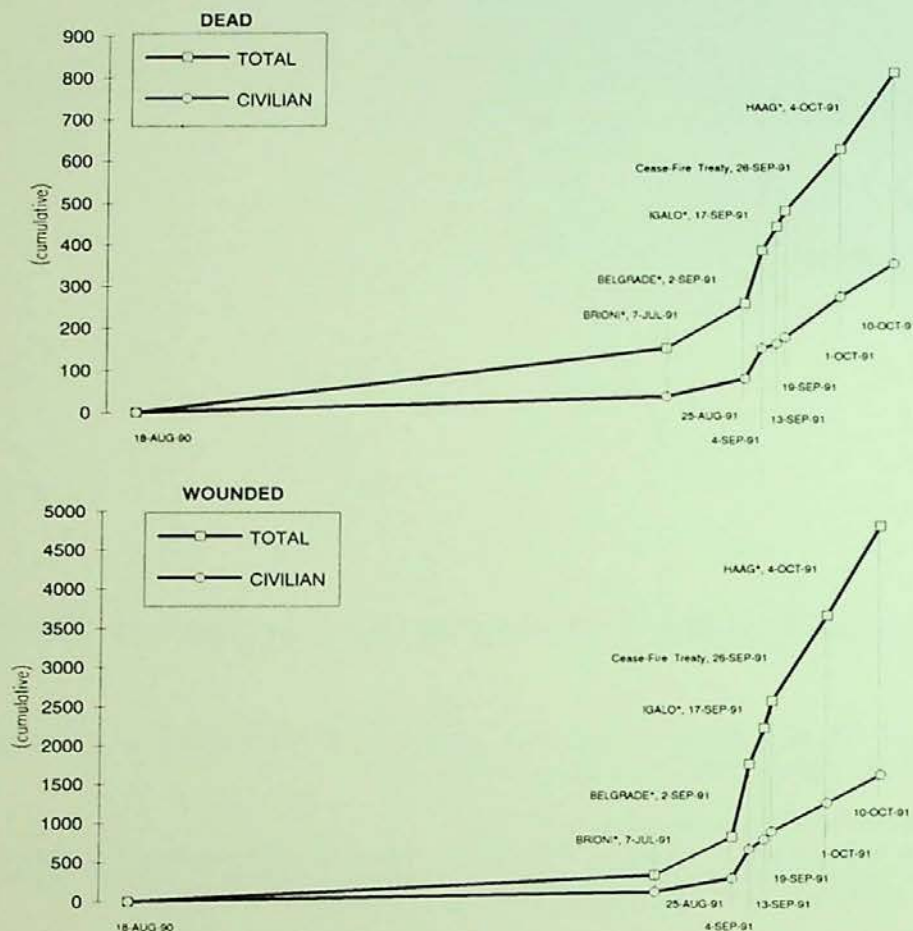


Figure 1. Total and civilian casualties in Croatia: August 18, 1990 - October 10, 1991. The asterisk indicates the venue of the Cease-Fire Agreements.

casualties on October 10, 1991, was: 4788 wounded and 807 dead (1603 and 350 civilians, respectively). The civilians constitute more than one third of the total casualty toll. The children casualties are presented in bold letters. These numbers show that civilians are the major target of the Yugoslav Army and Serbian terrorists.

Chronology of Civilian Suffering - An Incomplete List

The data presented are only those recorded at the Medical Corps Headquarters. The number of total and civilian casualties in Dalj, Hrvatska Kostajnica, Kijevo and many villages in Banija region are incomplete.

July 22, 1991

Serbian terrorists seized one civilian (I.K.) in Benkovac, and executed him in Knin.

July 24, 1991

One civilian (J.G.) was wounded in Žuta Lokva near Otočac.

July 25, 1991

One civilian (M.O.) from Vukovar, was killed in the suburb of Lužac and another one was wounded.

July 27, 1991

Two inhabitants (S.B., aged 63, and T.S., aged 51) of Nuštar, a village near Vinkovci, were wounded during the mortar attack.

One civilian (J.I.) was killed during the mortar attack on Hrvatska Kostajnica.

July 29, 1991

Serbian terrorists opened rifle fire on the bus carrying workers to the VUPIK agricultural industry near Svinjarevci (community of Vukovar), killing two (Z.G., aged 41, and N.R. aged 21) and injuring four workers (I. K., aged 37; M.P.; V.P., aged 44; and S.H., aged 22).

August 1, 1991

The villages of Dalj, Erdut and Aljmaš near Osijek, were attacked by YFA and Serbian irregular troops. It is still impossible to estimate the number of casualties because entrance to the villages has been denied by YFA. Only 25 cadavers

from Dalj, including 2 civilian ones (P.D. and N.T.), were transported to the General Hospital in Osijek. Witnesses testify that at least 18 were buried in the common grave on the Catholic cemetery in Dalj (also testified by the REUTER reporter). During the negotiations between Serbian irregular troops and Croatian police on August 13, 1991, Serbs confessed that 57 or 58 Croats had been killed. The number of the dead must be larger because many people have not been accounted as yet.

August 2, 1991:

In Osijek, a 9 year-old boy (R.R.) was wounded in the neck by a mortar shell shrapnel.

One farmer (M.S., aged 55) was killed in his yard in Darda near Osijek.

August 5, 1991

Terrorists massacred five peasants near Lovinac: M.P. (aged 75), S.K. (aged 55), M.S. (aged 40) and I.I. (aged 38). Their bodies were found 8 days later near the railroad.

August 6, 1991:

One peasant (M.K. aged 43) was shot by twenty machine-gun bullets while working in his field near Podravska Slatina.

August 7, 1991:

During a mortar attack, four civilians were wounded in Vukovar (T.S., N.K., V.L. and J.B.).

August 11, 1991

Mortar shell killed one civilian (I.R.) in his yard in Hrastovica near Petrinja.

August 14, 1991

Serbian terrorists attacked the village of Kraljevčani near Petrinja with mortar fire, looted the village and killed five elderly peasants who did not leave their homes (M.P.; N.P.; A.S., aged 55; N.S. and M.T., aged 68).

August 16, 1991

Two civilians (V.D. and B.D.) were wounded by mortar shells near Okučani.

Serbian terrorists massacred four inhabitants of Pečki near Petrinja (M.H., aged 32; S.H., aged 70; D.H., aged 28; and I.B., aged 23), when they came to the deserted village to feed the livestock.

August 17, 1991

Serbian terrorists opened sniping-rifle fire on the bus transporting the workers to the BELJE food factory, killing two workers (M.K. and D.M.) and wounding the driver (A.B.) and one worker (M.D.).

During the mortar attack on Grubišno Polje, 7 civilians were wounded: A.S. (aged 51), I.L. (aged 60), M.B. (aged 30), M.U. (aged 46), Z.C. (aged 18), J.O. (aged 35) and S.S. (aged 41).

Serbian terrorists opened heavy machine-gun fire on a civilian residence in Vukovar, killing one

man (D.M., aged 40) and injuring his brother (A.M.).

August 18, 1991

Serbian terrorists kidnapped Dr. I.Š., general practitioner from near Pakrac; his fate is still unknown;

August 19, 1991

Mortar shells launched on the very centre of Osijek hit the tram and killed the driver (N.T., aged 35) and one unidentified passenger, and injured 8 passengers.

Mortar shell killed one woman (Š.K.) in her yard in Ivanovo Selo, and another (D.D.) in her house in Sunja.

August 20, 1991

Serbian terrorists opened machine-gun fire on a car near Topusko, killing two civilians (I.B., aged 30, and M.K.).

August 21, 1991

Mortar shells fired on Laslovo killed one (S.B.) and wounded another civilian (J.K., aged 56).

August 22, 1991

During the attack on Komarevo, an ambulance driver (I.V.) was wounded by machine-gun fire while transporting wounded guardsmen to the hospital.

August 23, 1991

One woman was killed during the mortar attack on Topusko.

During the fights near Topusko, one guardsman (D.P.) volunteered to drive the ambulance with several wounded men; he was killed in the ambulance with heavy machine-gun fire near Taborište.

August 24, 1991

During the mortar attack on Otočac, grenades wounded 6 civilians (M.M., I.G., P.Lj., M.V., I.F. and I.P.) and killed a 24 year-old woman (M.B.) in the fourth month of pregnancy.

Two civilians were wounded by sniping-rifle fire in front of their house in Nadin near Benkovac.

Mortar shell killed one woman (K.Č., aged 49) and wounded another (T.J., aged 51) in Sunja.

August 25, 1991

During the air attack on Vukovar, a bomb hit a car killing 3, and wounding 13 civilians: A.J., M.F., V.S., S.S., V.P., M.D., K.B., V.B., Ž.D., M.S., Ž.K., R.S. and O.B.

YFA units opened machine-gun fire from their barracks on the nearby Police Station in Petrinja, setting it on fire. When the fire-fighters came, sniping-rifle fire from army barracks wounded one fireman (V.G., aged 37) on the roof of the Station.

Mortar fire launched on the village Ičevo Donje near Šibenik injured one peasant (I.D.).

Mortar shells destroyed two surgery rooms in Vukovar Hospital, wounding Drs. V.H. and S.T. and the medical technician A.K.

August 26, 1991

During mortar and artillery attack on Vinkovci, two civilians were wounded and one railroad worker was killed in the village of Nuštar near Vinkovci.

During mortar and artillery attack on the city of Sinj, four civilians were wounded: Z.P. (aged 36), A.K. (aged 34), I.R. (aged 22) and B.D. (aged 29).

The number of the dead is still not known in Kijevo near Sinj. The village was levelled to the ground by YFA.

Approx. 150 patients of the Center for Handicapped Children in Vrlika were without food, water and electricity and with only 6 members of the regular staff for 6 days. The children were finally evacuated to Split. One child (M.O.) died during the evacuation and one (I.K.) died in the Split Clinical Center.

During a mortar attack on Daruvar, I.Lj. and his 15-year-old daughter M.Lj. were killed, while her 17-year-old sister D.Lj. and five other civilians: Z.V., D.J., V.P., V.Lj. and N.V., were wounded.

During mortar and artillery attack on the village of Kruševo, two civilians were wounded (D.M. and one unidentified from Vrkići).

During the mortar attack on the village of Viduševac near Glina, one civilian (J.?) was killed.

August 28, 1991

During mortar attack on Hrvatska Kostajnica, one civilian (M.G.) was wounded.

August 29, 1991

During artillery attack on the villages of Stari Lički Osik and Mušala near Gospić, two civilians were wounded.

A worker of INA oil industry was killed by machine-gun fire in his car in Gospić.

Serbian terrorists and YFA units set the village of Skela on fire and massacred elderly people left in the village; witnesses state that more than ten were killed, but the bodies could not be collected since the terrorists control the territory.

August 30, 1991

One woman was killed and two other civilians were wounded in the mortar attack on the village of Bačin near Hrvatska Kostajnica.

One civilian was wounded during the mortar attack on the village of Jasenaš near Virovitica.

Mortar shell hit the car in Nuštar and killed one civilian (S.M.).

During heavy bombardment of Vukovar, 7 civilians were killed (M.B., I.L., J.M., B.F., Š.T. and

one unidentified) while 39 were wounded (A.J., M.D., V.B., Ž.D., V.S., M.Š., S.Š., I.K., R.Š., V.P., D.B., J.B., I.V., M.M., S.C., I.P., M.G., B.K., O.G., Z.D., T.J., S.K., K.B., I.K., G.K., M.O., J.O., R.Lj., D.G., A.S., U.N., R.J., Đ.B., Lj.S., J.M., A.H., A.I., S.B. and K.R.), including sixteen women, and **two children.**

Serbian terrorists tortured and massacred the father and the son of the Š. family near the village of Skela.

Twenty-three civilians were wounded during the air attack on Vukovar. **Nine of them were children: M.B. (aged 5), V.M. (aged 6), V.M. (aged 7), S.R. (aged 10), D.Š. (aged 10), N.C. (aged 9), J.B. (aged 13), S.L. (aged 13), N.G. (aged 14); 2 were women (B.K., K.M., K.Š., S.L., J.D., A.C., M.V., M.R.) and 6 men (M.K., P.M., K.V., B.B., I.P. and T.R.).**

During the mortar attack on Daruvar, one civilian (T.L.) was wounded by a shell shrapnel in his yard.

During the mortar attack on Hrvatska Kostajnica, two civilians (B.G., aged 20, and D.M., aged 41) were wounded.

September 1, 1991

A housewife (Z.K.) was killed by mortar shell in the village of Vukšić near Šibenik. In the nearby village of Rupe, terrorists opened rifle- and machine-gun fire on the funeral procession and wounded one civilian (I.T.) from Laškova.

Serbian terrorists killed 3 and wounded 2 civilians in Popovac, a village in Baranja. In the nearby village of Kozarac, one civilian was killed and one couple were hanged.

During the mortar attack on Daruvar, three civilians were killed (T.L., Ž.B. and V.P.) and 6 were wounded (M.P., V.P., V.Z., Ž.H., S.P. and V.Š.).

During artillery attack on Gospić, one grenade hit the Retirement Home and killed one man.

September 2, 1991

One 14 year-old girl was severely wounded during artillery attack on Vukovar.

Three mortar shells killed one unidentified man and injured three women (M.L., A.B. and B.G.) in their private residences in Borovo Naselje (suburb of Vukovar).

A mortar shell killed one woman (M.B.) and wounded her husband (M.B.) in the Marko Orešković Street in Gospić.

Heavy artillery attack was launched from the YFA barracks towards the center of Petrinja. Three tanks came out of the barracks into the central park and opened fire on surrounding houses. Grenades damaged one wing of the city hospital, killing one patient. All buildings in the city center were heavily damaged and the church tower was blown up by three tank grenades. Three civilians were killed (N.L., P.V. and Š.B.) and 14 wounded

(N.M., A.B., N.D., R.H., T.G., R.D., I.M., M.B., D.V., I.K., R.V., D.V., R.J. and M.M.).

Two YFA tanks and one armored vehicle entered the village Berak in Eastern Slavonia and opened heavy machine gun fire on citizens who fled into fields. Five dead bodies were found on September 4, 1991.

During the artillery attack on Petrinja, one tank grenade hit the City Hospital and damaged the Department of Psychiatry, killing one patient.

September 3, 1991

One tank grenade hit the fifth floor of a civilian building, 200 m from the YFA barracks in Osijek, **killing a 13 year-old girl (I.V.)** and injuring her parents I.V. and B.V. The grenade was fired directly from the barracks.

Three cannon grenades were fired from the YFA barracks in Đakovo, **wounding two girls (Ž.M., aged 14 and M.G., aged 16)** and their neighbor (F.M., aged 56).

Police sources confirmed that Serbian terrorists massacred the inhabitants of Majur, Graboštani and Stubalj near Hrvatska Kostajnica, but precise data is not yet available because the territory is under terrorists control. Refugees testify that at least 20 civilian persons were massacred.

A tank grenade killed one (V.Š.) and wounded another civilian (M.Š.) during heavy artillery attack on Nova Gradiška and Okučani.

YFA and Serbian terrorists opened heavy mortar and machine-gun fire on three small villages in Slavonia, Četekovci, Balinac and Čojlug, killing 21 civilians: J.T. (aged 18), M.M. (aged 25), A.K. (aged 26), M.S. (aged 28), M.L. (aged 32), N.B. (aged 34), Z.P. (aged 36), M.S. (aged 36), M.R. (aged 42), I.B. (aged 48), M.R. (aged 59), F.S. (aged 59), J.B. (aged 63), M.R. (aged 63), J.B. (aged 65), I.B. (aged 66), I.R. (aged 68), M.M. (aged 68), I.B. (aged 76), T.T. (aged 82), R.V. (aged 91). Five of them were women and 16 men.

September 4, 1991

One civilian (M.B., aged 85) was killed during heavy artillery attack on Hrvatska Kostajnica.

September 5, 1991

Several heavy artillery grenades hit the Retirement Home in Vukovar causing its complete destruction. Four dead and 6 wounded were found under the ruins.

Six tank grenades were fired at the tea factory in the Osijek suburb Brijest, killing one civilian (M.H.).

Mortar shells wounded one man (A.Š., aged 27) in the street and one woman (J.P., aged 57) in her home during the mortar attack on Vinkovci.

During the artillery attack on Osijek, several grenades hit the sugar factory, killing one (F.B.) and injuring two workers (M.J. and R.V.).

September 7, 1991

During the heavy artillery attack on Vukovar, four civilians were killed (one man, B.M., and three women, M.H., M.H. and L.K.) and four more wounded (two men, Z.P. and I.V., and two women, M.H. and G.K.).

September 8, 1991

One civilian (M.I.) was wounded during the artillery attack on the village of Gređani near Nova Gradiška.

One civilian (V.D., aged 33) was wounded in the attack on Petrinja.

September 9, 1991

During the artillery attack on Vukovar, a tank grenade hit the private residence of the R. family and wounded 3 civilians.

September 10, 1991

During the mortar attack on Belišće, three workers (M.M., S.P. and S.S.) were wounded in the BELIŠĆE factory.

During the artillery attack on the city of Osijek, grenade shrapnels killed one woman (M.R., aged 59) in her home, and wounded two more civilians.

Serbian terrorists have killed one unidentified Croat from the village of Lipovača.

September 11, 1991

One woman was killed by sniping-rifle fire while her child was wounded in the street of Osijek.

One woman (M.Z.) was wounded by rifle fire in Vinkovci.

One man (M.T.) was wounded in the artillery attack on Otočac.

Two civilians (one woman, M.B., aged 67, and one man, I.K., aged 28) were wounded in Hrvatska Kostajnica.

Two civilians (R.L., aged 48, and I.R., aged 26) were wounded near Petrinja.

One civilian (I.C., aged 41) was wounded in the heavy artillery attack on Vinkovci.

September 12, 1991

During the artillery attack on Vukovar, a worker of the VUTEKS textile industry (S.S.) was killed by a grenade.

Three civilians (M.G., aged 48; N.Š., aged 63, and N.K., aged 56) were wounded in Hrvatska Kostajnica.

September 13, 1991

A tank grenade was fired directly at civilians preparing shelter sand-bags in the yard of the BOROVO factory. Nine persons were killed: **one 5 year-old child, 6 women and 2 men.** Other 6 women were wounded.

Osijek General Hospital was heavily damaged by direct heavy artillery fire from the YFA barracks across the street. One nurse (D.P., aged 38)

was killed and two female doctors (M.D. and S.O., both aged 28) and a porter (K.Z., aged 28) were wounded.

September 14, 1991

Several grenades fell on the Retirement Home in Petrinja, killing one man (I.J., aged 88) and injuring 5 women (M.B., aged 84; A.L., aged 84; B.D., aged 69; M.M., aged 88; and D.P., aged 86) and one man (M.F.-Š., aged 62).

During the artillery attack on Vinkovci, 3 civilians were killed and 11 wounded, including one 7-year-old girl.

September 15, 1991

During the last two-day attack on Vukovar, 29 civilians were wounded, including a 2 year-old girl, N.Č.).

Seven civilians were wounded in the attack on Nova Gradiška.

During the artillery attack on Gospić, two civilians were wounded in the street.

Two civilians were killed and 2 wounded in the heavy artillery attack on Otočac.

Terrorists opened machine-gun fire on a car and a tram in Osijek, wounding one passenger. Sniping-rifle fire wounded one civilian in Šubićeva Street and another (J.T., aged 32) in Ljubijska Street.

September 16, 1991

During the terrorists attack on Doljani near Daruvar, one civilian was killed.

During the artillery attack on Pakrac, one man was killed in Prekopakra and one woman wounded by grenade shrapnels.

During artillery attack on Varaždin from the Army barracks stationed in the town, one woman (A.C.) was killed in the street, and the ambulance car driver, who tried to help her, was wounded. Another civilian was wounded near the police station. A post-office worker (Z.B.) was wounded in Nedeljanec.

September 18, 1991

Five workers were wounded by grenade shrapnels in the SLAVEN Hotel in Nova Gradiška during heavy artillery and air attack.

During artillery attacks on Pakrac, one civilian (I.R.) was wounded by sniping-rifle fire in the street. The ambulance car driver (D.J.) and a policeman (S.P.) were also wounded while trying to help I.R. Two civilians (D.Č. and I.Č.) were wounded by sniping-rifle fire in the nearby street.

Three civilians were killed in the attack on Sunja: two men (J.P. and P.C.), and one woman (N.S.).

September 19, 1991

Five citizens, four adults and one child, were wounded in the air attack on Slavonski Brod and the village of Donji Andrijevi.

During artillery attacks on Petrinja and Mošćenica, four civilians were wounded: two men (M.B., aged 55, and P.M., aged 64), one woman (Ž.S., aged 31) and one boy (B.Š., aged 16).

During the artillery attack on Karlovac, two civilians were wounded in the suburb Drežnik.

Three civilian persons were killed during heavy artillery attack on Otočac and Oštarije.

The civilian casualties of heavy artillery attacks on Valpovo and the surrounding villages of Beliše, Bistrinci, Petrijevi and Nard, were 4 dead and 12 wounded. One man (J.K.) and two women (M.N. and Lj.D.) were killed and two more wounded in Petrijevi.

Four civilians were killed by heavy artillery shells in Vukovar.

One civilian (M.D.) was killed by a mortar shell in Đakovo.

One tank grenade hit the LIBURNIJA bus on its route from Zadar to the village of Debeljak. The driver (D.Ž.) was wounded, while one passenger (M.T., aged 50) was killed.

September 21, 1991

During the air attack on the village of Krasno near Senj, one man (I.S.B., aged 26) was killed, while two women (M.B. and M.S.) and five other civilians and two children (M.S., aged 12, and A.S., aged 6) were wounded.

Serbian terrorists captured, tortured and massacred one civilian (M.P.) near Sunja.

September 21, 1991

During artillery and air attacks on Grubišno Polje and Ivanovo Selo, 10 civilians were wounded.

One civilian (A.S.) was killed in the artillery attack on Našice.

Three civilians were wounded in heavy artillery and air attacks on Zadar.

Heavy artillery fire opened from the army barrack in Borongaj, Zagreb, killed a 30 year-old woman (J.S.) and wounded her 18-month-old daughter. Three more women (M.B., aged 63; J.L., aged 23; and M.M., aged 68) and three men (M.H., aged 68; J.V., aged 38, and I.P., aged 57) were wounded. During the air raid on the suburb Kurilović near Velika Gorica, one civilian (N.V.) was killed and two (V.S. and F.Z.) were wounded.

During heavy artillery and air attacks on Petrinja and the surrounding villages, one civilian (D.M., aged 32) was killed and 7 were wounded (Ž.Č., M.V., J.B., J.B., N.V., K.C., M.M.).

September 22, 1991

Thirty-five wounded civilians were brought to the Nova Gradiška hospital after heavy artillery and air attacks. Four civilians were killed.

One civilian (J.C., aged 44) was wounded during artillery attack on Sinj.

One air-to-ground missile was launched from a YFA combat aircraft at the ZAGREB hotel in



Figure 1. Damaged or destroyed medical institutions up to October 12, 1991.

Karlobag, injuring several women and children, and **killing one 12-year-old boy**, all refugees from Slavonia.

September 23, 1991

During the air attack on Vinkovci, a 250 kg bomb completely destroyed a private residence and 3 civilian persons were immediately killed in the basement.

During the artillery attack on Šibenik, a 14-year-old boy was killed by a mortar grenade.

One girl was wounded by sniping rifle fire in Pakrac.

September 24, 1991

Two civilians were killed and several wounded in the artillery attack on Lovinac near Gospić.

During the mortar attack on Daruvar, one civilian (S.V., aged 50) was killed and 3 were wounded (I.H., aged 50; J.K., aged 70; and D.H., aged 20).

One civilian (M.S., aged 33) was killed by mortar shell in his yard in Nard, near Vinkovci.

A battleship positioned in the Split harbor opened gun-fire on the city, **wounding a 14-year-old boy (D.H.)** on his balcony.

September 25, 1991

Machine-gun fire, opened from YFA barracks in Split, wounded three citizens: two men (R.O. and B.I.) and one woman (Lj.B.). Three shipyard workers were also wounded.

September 26, 1991:

During artillery attack on Osijek, a railroad worker (T.M., aged 55) was killed while driving his bicycle. Six more civilians were wounded.

During the attack on GRABOVAC auto-camp near Slunj, a grenade destroyed a part of the GRABOVAC Motel, **killing 3 children (brother and two sisters; 4-month-old I.Š.; D.Š., aged 18, and J.Š., aged 17)** and one man. Seven more civilians were wounded.

September 27, 1991

During heavy artillery attack on the village of Gat near Valpovo, a grenade **wounded five children: S.K. (aged 12), I.S. (aged 12), I.S. (aged 14), T.A. (aged 12) and A.V.** At the same time, **several children were wounded during the mortar attack on the village of Veliškovci.**

September 29, 1991

During heavy artillery and air attacks on Vukovar, **two children, a brother and a sister, were wounded: D.B. (aged 11) and J.B. (aged 16).**

During heavy artillery attack on Bjelovar, one civilian (D.Ž.) was killed and two others wounded (T.Ž. and F.B.).

In the Zadar inland, 5 civilians were wounded (Ž.Đ., K.B., A.B., S.Š. and M.C.) and one was killed (D.C.) during heavy artillery and air attacks.

September 30, 1991

Two civilians (I.T. and J.B.) were wounded in Nuštar during heavy artillery attack.

Attacks on Medical Personnel, Hospitals and Ambulances, and Violations of the Geneva Conventions Concerning Medical Care and Service

Medical personnel and medical institutions were frequent targets of the combined attacks of Serbian extremists and YFA forces. The hospitals in many Croatian cities were damaged or destroyed (Fig. 2), and medical personnel killed, wounded or abducted. The following is a partial list of their suffering.

July 30, 1991

Serbian extremists abducted Dr. K.Š., medical technician M.Č. and ambulance driver M.M., who were transporting two wounded persons from the battlefield near the village of Struga in Banija. Seven days later, the medical personnel were released, but the ambulance and complete medical equipment remained in the hands of the terrorist. The fate of the two wounded persons is not known.

August 13, 1991

General Špiro Niković, commander of the YFA garrison in Knin, would not allow the medical personnel to take care of the epidemiological situation in the village of Plastovo unless the Croatian forces retreat from their positions. There were many dead cattle in this destroyed and almost deserted village.

August 18, 1991

Serbian extremists abducted Drs. I.Š. and S.? near Pakrac.

August 22, 1991

During the attack on the village of Komarevo, Serbian extremists opened automatic and rifle fire on the ambulance and wounded the driver I.V.

August 23, 1991

D.P. volunteered as an ambulance driver to transport a gravely wounded guardsman from the battlefield in Topusko to the Sisak Hospital. Serbian extremists, hidden along the road, opened heavy machine-gun fire on the ambulance and both the driver and the patient were killed.

August 25, 1991

During the heavy artillery attack on Vukovar, mortar shells destroyed two operating theaters in the City Hospital; Drs. V.H., S.T. and medical technician A.K. were wounded.

During the artillery and air attack on Vrlika, a grenade hit the Center for Handicapped Children and one grenade fell in the immediate neighborhood of the local Medical Center. YFA units allowed the ambulances to the occupied and de-

stroyed village of Kijevo only after long and complex negotiations.

August 26-27, 1991

Sniping rifle fire was opened on the departments of the Medical Center in Vukovar on several occasions.

September 1-2, 1991

During the heavy artillery attack on Gospić, the City Hospital was damaged and several grenades fell onto the Retirement Home; one elderly person was killed by a grenade shrapnel.

During the heavy artillery attack on the center of the town of Petrinja, several tank grenades hit the Department of Psychiatry of the Town Hospital, killing one patient.

September 4, 1991

During the whole day, machine-gun and direct heavy artillery fire was targeted from Army barracks in Osijek to the nearby City Hospital, resulting in the severe destruction of the hospital; all negotiations with the YFA officials were useless. They threatened the Army would level the whole hospital to the ground. A convoy evacuating cerebral palsy patients from Vukovar to Zagreb was attacked by machine-gun and heavy artillery fire near the village of Bogdanovci. Medical personnel with patients hid in the ditches along the road for full six hours before managing to escape toward Vinkovci.

September 5, 1991:

Two grenades fell within the campus of the Medical Center in Vinkovci.

During the heavy artillery and air attack on Vukovar, several grenades hit the Retirement Home, killing four and wounding six elderly persons.

September 10, 1991

Heavy machine-gun fire was opened on the ambulance on the road from Hrvatska Dubica to Hrvatska Kostajnica.

September 12, 1991:

During the heavy artillery attack on Vinkovci, several grenades hit the building of the school clearly marked by Red Cross sign. The school served as a provisional shelter for the wounded persons in case of massive destruction of the city.

September 13-15, 1991

During the heavy artillery attacks on Osijek, direct artillery fire from YFA barracks was targeted at the City Hospital. Four departments were completely destroyed, parts of the hospital set on fire, and water and electricity installations seriously damaged. All appeals to the Army were without effect, so that medical personnel with over 1000 wounded patients were forced to take shelter in the basements corridors, where they have remained up to the present. One nurse (D.P., aged 38) was killed and two female doctors (M.D. and

S.O., both aged 28) and a porter (K.Z., aged 28) were wounded during the attacks.

September 29, 1991

The data collected by the Ministry of Health show that a number of large hospitals and medical centers in Croatia have been destroyed by YA artillery attacks until now (in Osijek, Vinkovci, Gospić, Vukovar, Šibenik, Pakrac, Nova Gradiška, Hrvatska Kostajnica and Daruvar). Twenty-two ambulances were completely destroyed by Serbian extremists and YFA, and over 40 cars damaged. The large hospital in Pakrac was completely destroyed by howitzer and tank fire, and 270 psychiatric patients were evacuated after five days of hiding in the hospital basements without food, water and electricity. The evacuation was secretly performed during the night, because the YFA units opened fire on the International Red Cross convoy travelling from Bjelovar to Pakrac two days before.

October 1, 1991

During the heavy artillery and air attack on Zadar, several grenades hit the Retirement Home and the whole wing of the building was destroyed.

October 2-6, 1991

YFA units and Serbian extremists opened machine-gun fire on all ambulances on the road during heavy fights in the Dubrovnik area.

October 3, 1991

Psychiatric patients from the hospital in Zemunik Donji were evacuated to Zadar after being imprisoned by YFA units for several days. The hospital had to be evacuated because the YFA

units and Serbian extremists had installed their headquarters in the building.

October 4, 1991

During the heavy bombardment of Vukovar, grenades fell onto the already half-destroyed Medical Center, causing complete destruction.

October 5, 1991

During the heavy artillery attack on Duga Resa and Karlovac, several grenades hit and destroyed the LOLA RIBAR Factory of Medical Material (manufacturing bandages and other similar material).

October 6, 1991

A YFA battleship opened fire on the ship with 40 hemodialysis patients on their way from Zadar (which was under severe artillery attack for several days) to Rijeka. The patients from the Psychiatric Hospital on the island of Ugljan were on the same ship.

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Moral of the War against Croatia: A Forensic Picture

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Abstract. The brutality and cruelty of the war against Croatia is documented by fragments of experience of a forensic medicine professional working in the region of Banija (city of Sisak). Forensic investigation of six cases of the killing of civilians discloses the moral, intentions, tactics and strategy of terrorists fighting against the Croatian state, its people and all citizens.

Key words: civilians, Croatia, forensic expertise, moral, war crime

*Give me strength to face a fact though it may
slay me (A. Huxley).*

We live in difficult times in which the victims are known but the perpetrators are most frequently unknown, i.e. in the wartime. The knowledge and experience acquired during peaceful times have proved inadequate to readily understand the new mechanisms of injuring with both small infantry arms and planted explosives as well as with the arms strictly forbidden by international conventions.

From a great number of civilian victims, several cases providing interesting analytical data on the mechanism and dynamics of wounding and on the moral of such a way of warring, are described.

Case reports

K.J., female, aged 16, from the village of Gornja Budičina, the community of Petrinja, was killed by gunshots on July 5, 1991, at about 8.00 a.m. External examination revealed some ten erratic gunshot wounds on the right side of the trunk and extremities, from several to 40 mm in diameter, mostly with erratic margins. Along the wound canals, multiply broken bones of the right shoulder and right shoulder-blade, and of both knees, were observed. Internal examination showed a complete gunshot penetration of the lungs and incomplete gunshot penetration of the liver, where

a metal bullet sheath was found. The distribution and appearance of the entrance wounds led to a conclusion that they had been caused by the projectiles already exploded, i.e. by the bullets that had passed through a solid obstacle. Official inspection revealed that the wounding had occurred through the car-body. Close analysis of these wounds led to a positive conclusion that they had been inflicted by the action of at least five separate gunshots. A great number of severe external injuries caused massive bleeding, but the immediate cause of death was the severe injuring of the lungs and liver.

P.D., male, aged 52, from the village of Budičina, the community of Petrinja, was killed by gunshots in the village of Knezovljani, the community of Kostajnica, on July 12, 1991. As the dead body was lying on the road for 2-3 days, intensive putrescent changes were observed, with numerous maggots all over the free parts of the cadaver. External examination showed twelve gunshot wounds in total: one on the right side of the chin, two on the upper part of the chest, five in the region of the left lower quadrant of the anterior wall of the abdomen, two in the left flank region, one on the posterior part of the left thigh, and one on the back of the left hand with fracture of three hand bones. A great number of erratic superficial injuries on the anterior part of both thighs were also observed. The number of wounds, their distribution and gunshot canals determined on autopsy



Figure 1. Civilian massacres in Croatia, recorded by October 12, 1991.

led to a conclusion that they had mostly been inflicted at the moment of body rotation along the longitudinal axis. The number of wounds and the fact that they must have been inflicted over a very short period of time indicated them to have been caused by automatic weapons. Superficial wounds on the anterior side of the thigh were inflicted either by projectile chips or by secondary projectiles, i.e. particles of the solid support on which the body was lying.

L.A., female, aged 70, from the village of Prnjavor, the community of Petrinja, was killed by gunshots on July 29, 1991. External examination revealed four entrance gunshot wounds on the right side of the trunk, i.e. two wounds in the region of the right clavicle and two in the region of the right anterior abdominal wall, and four exit gunshot wounds, i.e. one in the center of the left side of the back, one quite low in the left flank region and two on the posterior part of the right flank. The exit gunshot wounds on the left side of the back and flank were undoubtedly found to correspond to the entrance gunshot wounds in the region of the right shoulder, whereas the exit gunshot wounds on the right flank region corresponded to the entrance gunshot wounds in the region of the right side of the abdomen. A series of secondary wounds obviously caused by the projectiles of smaller penetration, i.e. by particles of the ground moved by shots and projectiles from firearms, were also observed. Such a relationship between the entrance and exit wounds, along with

the finding of secondary injuries, indicated that they must have been inflicted in two different positions of the body. Thus, the wounds on the right side of the abdomen were inflicted in the standing position of the body, whereas those in the region of the right shoulder were caused in the horizontal position of the body, whereby a series of secondary injuries due to projectiles striking immediately in front of and under the victims body.

Z.J., male, aged 63, from Glina, killed by gunshots on August 25, 1991. On external examination, striking pallor of the skin and visible mucosa was observed. Two entrance gunshot wounds were found on the exterior side of the upper third of the right thigh, whereas the exit wounds were in the internal side of the thigh, with the latter continued by two wide entrance gunshot wounds on the left thigh that led to multiple fracture of the femur and a very large hematoma. Death occurred due to massive and prolonged bleeding, suggesting that the victims life could have certainly been saved by timely medical intervention. It has been documented that the victim lied on the spot for several hours because of the snipers firing uninterruptedly all around.

P.S., male, aged 54, from Petrinja, was found dead near the road, not far from his own house, on September 4, 1991, at 6.00 a.m. External examination showed extreme pallor of the skin and visible mucosa, and two gunshot wounds, one entering on the right and exiting on the left side of the

neck, and the other entering in the region of the anterior part of the left rib arch and exiting in the middle of the back. As there was a considerable change in the direction and localization of the gunshot wounds, it was concluded that the wound in the region of the neck was inflicted in the upright position of the victims body, whereas that in the chest must have been caused after the victim had fallen down.

P.M., male, aged 52, from the village of Gradus upon Sava, the community of Sisak, was killed on September 20, 1991, at about 5.00 p.m. External examination revealed two gunshot wounds on both thighs, starting with entrance wounds on the external side of the right thigh along the longitudinal axis of the extremity and continuing by a gunshot canal through the posterior group of muscles of the right and left thigh, where the largest diameter was about 4 mm. Signs of massive bleeding were observed all along the lower extremities, indicating that the injured must have been standing upright for some time after the wounding. The dead body was accessible only several hours after the wounding.

Brief analysis of the cases suggested that most injuries were inflicted by individual gunshots, most probably snipers. Very frequently, trained snipers

point at the victims region of genitalia, i.e. the pelvis, which provokes a strong frightening effect, especially in the mass. The severity of the wounds pointed to projectiles with a strong blast effect, i.e. bullets with soft tip forming a tissue plug ahead and causing extremely extensive devastations. Some of the victims were only severely injured but alive and their lives could have probably been saved by timely medical aid. However, they could not be rescued from the area where they had been wounded, due to the real threat to life of the possible rescuer. Thus, the evacuation of the deceased irresistibly reminds of Antigone's act removing the body of her brother Polynices from the town square under the threat to her life.

When mentioning Antigone and Thebes, let us conclude with the last sentence from The Seven from Thebes:

May the fate be common to us.

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Civilian Massacre in Dalj

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Abstract. On August 1, 1991, the Yugoslav Federal Army and Serbian extremists attacked the village of Dalj, near Osijek. The civilians took refuge in Osijek and Hungary, but many of them were captured by terrorists. Their fate is still unknown, and the number of missing persons is more than 300. The Federal Army denies the entry to the village and permitted only 25 cadavers to be taken to the Osijek Hospital. Two out of 25 were civilians: P.D., a baker of Albanian origin, and N.T., a bakers assistant, a Croat. The decedent N.T. was killed from the back by rifle fire, while the decedent P. D. was first beaten and then executed by two close-range gunshots in the head.

Key words: civilians, Croatia, forensic expertise, war crime

Description of the Event

Combined forces of Serbian extremists and Yugoslav Federal Army attacked the village of Dalj near Osijek on August 1, 1991. Under heavy artillery fire, the civilians tried to flee Dalj, but many were captured by terrorists. Busses and medical personnel were sent from Osijek to help evacuate the wounded and the refugees, but the terrorists took hold of the busses and took the drivers as captives. It is still impossible to estimate the death toll in Dalj, since all visits have been restricted, and the village is under heavy terrorist guard. Only several members of the Federal Committee for the Cease-Fire Surveillance and some civilian officials were allowed the entry. Reporters were denied access to any information. According to the last census, the population of Dalj numbered 2500 inhabitants, with approximately 40% Catholics, as stated by the local vicar. A hundred and fifty of them are now left in the village, and several hundred among the refugees in Osijek, some of them recovering at the General Hospital. The fate of others is not known. Witnesses state that more than a hundred person, members of the National Guard and civilians, were barbarously

killed and massacred. Many of them were buried in the open fields or thrown in the Danube. The terrorists and the Federal Army allowed transportation of only 25 cadavers to the Hospital Center in Osijek. The medical personnel was locked up with the cadavers in a refrigerated lorry during the trip back to Osijek. Of the 25 dead transported to the morgue, two were civilians, P.D. (Albanian) and N.T. (Croat).

Forensic Findings

After the official investigator of the Osijek Distric Court, Mr. V.S., had opened the inquest, the autopsy of the decedents was performed at the Department of Pathology and Forensic Medicine, Osijek General Hospital, on August 3, 1991. The following is a transcript of the relevant parts of the autopsy reports.

DECEDENT: P.D.

Autopsy Code: K:1422/91;S.312/91

Age: 31

Occupation: baker

Comment: found dead by his bakery



Figure 1. Decedent P.D., aged 31. Two entrance gunshot wounds in the right temporo-parietal region. The histological examination of the dermis and epidermis around the wounds revealed traces of a dark foreign material, corresponding to firing byproduct, indicating that the wounds were inflicted from a close range.

External Examination: The cadaver is of a well-built, 180 cm-high male. Two entrance gunshot wounds are found in the right temporo-parietal region (Fig. 1). The wound No. 1, measuring 0.9 cm and encircled by a 3 mm-wide contusion band, is found 7 cm from the external auditory meatus and 11 cm from the midline. The wound No. 2, measuring 0.9 cm and encircled by a 3 mm-wide contusion band, is found 6 cm from the external auditory meatus and 13 cm from the midline. In the left fronto-parietal region, a single stellate exit gunshot wound is found, measuring 12:3 cm. The wound margin is ragged and suffused with blood, with fragments of bone and brain tissue protruding from the opening. The wound canal is directed to the left and penetrates the right and the left cerebral hemisphere. In the left frontal region, several smaller abrasions, measuring 1-2 cm, are found (Fig. 2). Both eyelids are swollen and suffused with blood. The right conjunctiva is suffused with blood. An abrasion measuring 2 cm is found in the right zygomatic region and two abrasions, measuring 1 cm each, are found on the chin.

On the right side of the chest, an abrasion is found below the right nipple, surrounded by a livid bruise and measuring 4:1 cm. In the upper part of the back, three linear 6-7 cm-long abrasions and one circular, measuring 2 cm in diameter, are found.

A laceration, measuring 5:3 cm and surrounded by a hematoma, is found on the inner side of the right upper thigh. On the lateral and posterior parts of the right thigh, 55 cm from the soles of the feet, two livid bruises are found, measuring 7:2 and 12:8 cm, respectively.

Internal Examination: The scalp is suffused with blood in the frontal region and around gunshot entrance wounds in the right temporo-parietal region. It is considerably ragged around the exit wounds. In the right parietal region, a round defect is found, measuring 1 cm. Next to it is another triangular defect with fracture lines radiating towards the frontal, parietal and occipital region. In the left parietal region, a large calvarial defect is found, measuring 10 cm in diameter. On the base of the cranium, several fracture lines are found from the crista galli towards the sphenoidal plane. The dura is torn in the left and right parietal regions. A thin layer of blood (less than 1 mm) is found on the inner side of the dura. The pia is torn over both parietal lobes. The arteries are medium sized and the lining surface is smooth and shiny. The brain tissue is soft; extensive lacerations of the cortex and white substance are found in the right temporo-parietal region and the left parietal region, with brain tissue squashed into a bloody mash. The brain cavities are filled with blood.



Figure 2. Decedent P.D., aged 31. Brill's hematomas are found around the eyes. Hematomas and excoriations on the forehead, right cheek and chin were inflicted by a blunt mechanical force.

On the parietal pleura of the right hemithorax, blood suffusions are found. Multiple rib fractures (ribs III-VI) in the mamillary line are also found.

Histological Findings: In the region of the gunshot wounds, defects of dermis and epidermis are found. The epidermis is elevated on the wound margin and the surface covered with microscopic brown-black grains. Similar grains are found in the dermis.

Pathoanatomical Diagnoses:

Gunshot wounds of the head

Vulnera sclopetaria capitis

Bruises of the head, trunk and extremities

Hematomata cutis capitis, corporis et extremitatum

Skin excoriations of the head and trunk

Excoriationes cutis capitis et corporis

Multifragmented fracture of the cranial vault and base

Fractura comminutiva cranii

Brain concussion

Conquassatio cerebri

Fractures of the ribs III-VI

Fracturae costarum III-VI lateris dextri

Cause of Death:

Head gunshot wounds

Vulnera sclopetaria capitis

Opinion: The external examination and autopsy of the decedent P.D. revealed that the

death was homicidal, caused by several gunshot wounds of the head.

The entrance gunshot wound No. 1, measuring 0.9 cm in diameter, was found in the right parietal region, 7 cm from the external auditory meatus and 11 cm from the midline. The contusion band measured 0.3 cm in diameter. The entrance gunshot wound No. 2 was similar to the first one and was found in the same region, 6 cm from the external auditory meatus and 13 cm from the midline. Common stellate exit gunshot wound was found in the left fronto-parietal region, measuring 12:3 cm. The histological examination of the dermis and epidermis revealed traces of dark a foreign material, corresponding to firing byproducts. The wounds are classified as close-range gunshot wounds.

Hematomas of the upper and lower eyelids and conjunctivas and skin abrasions of the forehead, right zygoma, the chin and the chest were found. Striated excoriations and bruises were also found in the dorsal and lumbar region and on the medial side of the right thigh. These wounds were inflicted by unspecified mechanical force. Their location suggests that they were not incidentally inflicted, but were probably the result of a blunt mechanical force.

DECEDENT: N.T.

Autopsy Code: Kir:1422/91; S.314/91

Age: 22

Occupation: baker's assistant

Comment: found dead by the bakery

External Examination: The cadaver is of medium built, 185 cm high male. On the outer side of the right thigh, an entrance gunshot wound (No. 1) is found 74 cm from the soles of the feet, measuring 1 cm and encircled by a 3 mm-wide contusion band. The wound canal is directed backward and to the left. The exit gunshot wound with ragged margins, measuring 6 cm in diameter, is found on the back of the right thigh. The lower margin of the wound is 68 cm from the soles of the feet.

On the right side of the face, a large laceration with contused and ragged margins is found (wound No. 2). Lacerated muscles and broken bones are protruding from the wound opening.

In the right parietal region, 9 cm from the external auditory meatus and 13 cm from the midline, an entrance gunshot wound is found (wound No. 3), measuring 1 cm and encircled by a 0.3 cm-wide contusion band. The wound canal is penetrating the skull, the right cerebral hemisphere and the base of the cranium. The exit wound is found on the left side of the face, below the external auditory meatus and measures 6 cm in diameter. The direction of the wound canal is downward and to the left.

In the left parietal region, a large laceration with ragged margins, measuring 13:10 cm, is found (wound No. 4). Brain tissue and bone fragments are protruding from the wound opening.

On the left side of the back, an entrance gunshot wound is found 125 cm from the soles of the feet and 4 cm from the midline (wound No. 5) measuring 1 cm in diameter and surrounded by an eccentric contusion band (width: 0.3 cm in the lower, and 0.1 cm on the upper margin). The wound canal is penetrating the left chest wall through the 10th intercostal space and then through the upper and lower lobes of the left lung, grazing the left ventricle. The exit wound is found in the 2nd left intercostal space in the midclavicular line and measures 3 cm in diameter.

On the back of the right shoulder, an entrance gunshot wound is found 150 cm from the soles of the feet and 18 cm from the midline (wound No. 6). The diameter is 1 cm, and the contusion band eccentric, measuring 0.3 cm medially and 0.1 cm laterally. The wound canal is penetrating the dorsal musculature and the exit wound is found on the right side of the neck, 158 cm from the soles of the feet and 7 cm from the midline, measuring 5 cm in diameter. The wound canal is directed upward and to the left.

An entrance gunshot wound (wound No. 7) with ragged margin and measuring 5 cm is found in the upper part of the arm and in the armpit. The wound canal is penetrating the chest wall through the 2nd intercostal space, injuring the upper lobe of the right lung and the visceral pleura at the level of the 4th intercostal space. The surrounding spine musculature is suffused with blood. The projectile could not be found.

Two lacerations in the left occipital region are found close to each other, measuring 2 and 3 cm in diameter.

Two lacerations with ragged margins and measuring 5 and 6 cm, respectively, are found on the back and front of the right forearm in the carpal region. The muscles are torn and both ulna and radius fractured. On the front side of the right forearm, two abrasions are found. A large wound with ragged margins and measuring 5 cm is found on the outer side of the right forearm. In and below the left elbow, two abrasions, measuring 2 and 2.5 cm, are found.

Several smaller abrasions are found on the right knee and foreleg, measuring 1 cm in diameter.

Internal Examination: Large wound (No. 4) is found on the left side of the scalp. The vault is medium-sized, symmetrical. In the right parietal region, a 15 cm-wide circular defect is found, with fracture lines radiating to the temporal and basal regions of the skull. On the left side of the vault, a large bone defect is found in the frontal, temporal and parietal region, measuring 13 cm in diameter.

The dura is lacerated in the right and especially left parietal region. Several fractures are found on the base of the skull in the anterior cranial fossa around the lamina cribrosa, and on the right side, encircling the whole cranium in the frontal plane. A bone defect, measuring 4 cm is found in the middle cranial fossa. Fracture lines radiating from the defect are continuous with the fractures in the anterior cranial fossa.

The pia is lacerated in the right parietal and left basal region. In the right parietal and left temporal lobe, discontinuities of the brain tissue are found and the brain tissue is squashed. The brain cavities are filled with brown substance.

In the 10th, the anterior part of the second left intercostal space and the 4th right intercostal space near the spine, muscle lacerations are found. The lacerations are found on the left and right visceral pleura.

On the left side of the heart, a laceration of the left ventricle is found, measuring 3 cm in diameter.

On the posterior side of the left lower lobe, the laceration of the visceral pleura and the lung is continuing in a similar laceration of the frontal aspect of the upper lobe. The right lung is smaller and of green-purple color. On the side of the upper lobe, two smaller lacerations of the visceral pleura are found, continuing in the laceration of the lobe and medial visceral pleura.

Pathoanatomical Diagnoses:

Gunshot wounds of the head, trunk and extremities

Vulnera sclopetaria capitis, corporis et extremitatum

Multifragmented fracture of the cranial vault and base

Fractura comminutiva calvariae et basis cranii

Brain contusion

Conquassatio cerebri

Multiple fractures of the mandible

Fracturae comminutivae mandibulae

Rupture of both lungs

Ruptura pulmonum

Fracture of the scapula

Fractura scapulae lateris dextri

Multifragmented fracture of the right forearm

Fractura comminutiva antebrachii dextri

Cause of Death:

Gunshot wounds of the head and trunk

Vulnera sclopetaria capitis et corporis

Opinion: The external examination and autopsy of the decedent N.T. revealed that the death was homicidal, caused by several gunshot wounds of the head and the trunk.

The external examination revealed the entrance gunshot wound No. 1, measuring 1 cm in diameter, on the outer side of the right thigh, 74 cm from the soles of the feet. The wound canal penetrated the right thigh and the exit wound was found on the inner side of the thigh, measuring 6 cm in diameter. The direction of the canal was upward and to the left. The wound was a long-range gunshot wound.

The entrance wound No. 2 was found on the right side of the face. The wound margins were ragged and the wound was filled with squashed muscles and several fragments of the lower jaw. This wound was probably caused by one deformed projectile or several secondary projectiles, formed after the first one had passed through a barrier.

The entrance gunshot wound No. 3, measuring 1 cm in diameter and encircled by a 0.3 cm-wide contusion band, was found in the parietal region, 9 cm from the external auditory meatus and 13 cm from the midline. The wound canal penetrated the cranial cavity and the brain, exiting in the front of the left external meatus as a wound measuring 6 cm in diameter. The wound canal was directed downward and to the left. This wound was a long-range gunshot wound.

The entrance gunshot wound No. 4 was found in the left parietal region. It was large, with ragged margin and filled with bone fragments and brain tissue. This wound was probably caused by a single deformed projectile or several secondary projectiles.

The entrance gunshot wound No. 5 was found on the left side of the back, 125 cm from the soles of the feet and 4 cm from the midline. It measured 1 cm in diameter and had eccentric contusion

band measuring 0.3 cm in the lower and 0.1 cm in the upper part. The wound canal penetrated the 10th intercostal space and upper and lower lobe of the left lung, exiting through the 2nd left intercostal space. The exit wound was found below the left clavicle and measured 3 cm in diameter. The wound canal was directed forward and upward. This wound was a long-range gunshot wound.

The entrance gunshot wound No. 6, measuring 1 cm in diameter, was found on the back of the right shoulder, 150 cm from the soles of the feet and 18 cm from the midline. The eccentric contusion band measured 0.3 cm on the left and 0.1 cm on the right side. The wound canal penetrated the musculature of the back and neck. The exit wound was found in the base of the neck, 150 cm from the soles of the feet and 7 cm to the left of the spine. It measured 5 cm in diameter. The wound canal was directed upward and to the left. The wound was a long-range gunshot wound.

The large irregular entrance gunshot wound (No. 7), measuring 5 cm, was found on the right arm and in the armpit in the anterior axillary line at the level of the 2nd intercostal space. Two lacerations were found on the medial side of the right upper lobe. A small laceration of the right visceral pleura was found in the 4th intercostal space, near the spine. The wound canal was horizontal, directed to the left. The appearance of the entrance wound suggests that the wound was inflicted by a fragmented projectile or a secondary projectile.

Two large wounds with ragged margins, measuring 5 and 6 cm in diameter and accompanied by multifragmented fractures of the ulna and radius, were found on the lower end of the right forearm. They may have been caused by a fragmented projectile or secondary projectiles.

Conclusion

The fate of more than 300 inhabitants of Dalj is not known at the moment, but two civilian deaths described in this report may be the ominous sign. The decedent N.T., a baker's assistant, was killed from the back by rifle fire, and the baker, P.D., was executed by two gunshots in the head. The forensic expertise showed that the contusions and lacerations found on his body were inflicted by blunt mechanical force, suggesting that he was beaten before the execution. It is important to point out his Albanian origin, which may have brought about his ruthless execution.

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Civilian Massacre in Lovinac

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Abstract. Five dead civilians were found by a country road near Lovinac, on August 13, 1991. Their age ranged from 34 to 77 years. The forensic findings indicated that four of them had close-range gunshot wounds, and that one was killed while trying to run from the spot. They were killed on August 5, 1991, when Serbian extremists captured them in the village.

Key words: civilians, Croatia, forensic expertise, war crime

Description of the Event

This report is concerned with the death of five unarmed men killed by Serbian extremists on August 5, 1991, near the railroad in the village of Lovinac, the community of Gospić. The dead bodies of the decedents were found on August 13, 1991, and were identified by the relatives on the spot. Earlier identification and transport were not allowed by local terrorists and Yugoslav Federal Army. After the identification, the inquest was opened and the cadavers transferred to the General Hospital in Gospić. The autopsy was performed by Dr P. Katalinić, specialist of forensic medicine. The assistant criminologist took photographs, noted all relevant data and collected relevant criminological information.

From the Record of the Investigation on the Spot:

Findings on the spot indicated that four decedents were killed by rifle-fire in the back of the head. After they had fallen down, they were shot again in the back and legs. The investigation on the spot showed that bodies of the decedents M.Š. (aged 41) and I.I. (aged 34) were laying together in the ditch by a countryroad, with upper part of the body in the bushes, where they fell after being shot in the head (Fig. 1a). The decedents M.P. (aged 77) and S.K. (aged 54) were also found in

the nearby bushes (Fig. 1b). The decedent J.S. (aged 58) was found facing the ground in the bushes 2 to 3 m to the right (Fig. 2). It should be pointed out that projectile cartridges could not be found on the spot, due to the inconvenient surroundings (high grass, bushes) and the speed of the examination on the spot because of the threatening artillery attack.

From the Autopsy Records

DECEDENT No. 1: M.Š., aged 41

The cadaver is of a male dressed in blue jeans, shirt, vest, underpants, socks and rubber footwear in the advanced state of decomposition and infested with a large number of maggots (8 mm-long). The external examination reveals a circular entrance gunshot wound behind the left ear, measuring 10 mm in diameter and with underlying multiple bone fractures. The exit gunshot wound with large, ragged and dry margins, is found on the right side of the head. The skin is desquamated, the dura is hard and dark, and the brain tissue almost completely destroyed.

A skin defect, measuring 11:7 mm, is found in the scapular region and is directed downward. A defect measuring 22:9 mm is found in the right gluteal region and is directed downward and to the left. A laceration, measuring 5:1 cm, is found 5 cm from the previous defect, and another one

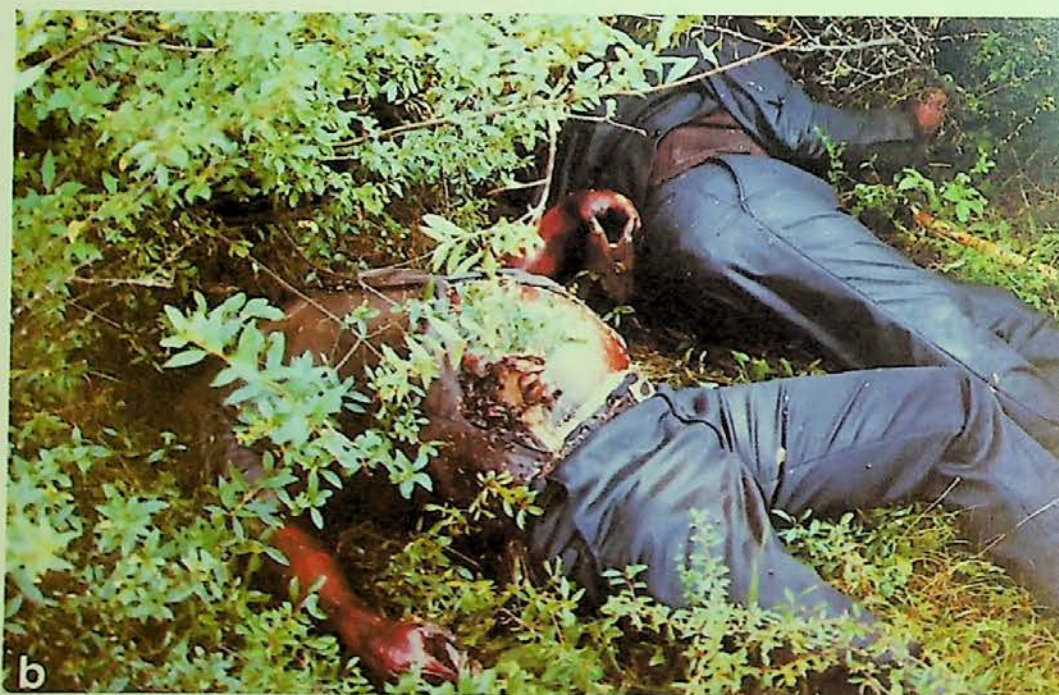


Figure 1. The bodies of the decedents M.Š. and I.I., found in the bushes near the country road (a). The bodies of the decedents M.P. and S.K. (b), found in the bushes close to the decedents M.Š. and I.I.

below it, measuring 2:1 cm. Both defects are directed downward. A defect measuring 8 mm in diameter is found in the left gluteal region. On the posterior upper third of the right thigh, a defect measuring 14:7 mm is found. On the right shoulder, a skin defect measuring 3:2 cm is found. An entrance gunshot wound is found on the back of the right shoulder. The wound canal penetrates

the subcutaneous and muscle tissue, and exits more to the right of the shoulder. Other perforating gunshot wounds were found in the gluteal region and on the legs.

Pathoanatomical Diagnoses:

Gunshot wound of the head
Vulnus sclopetarium capitis



Figure 2. The body of the decedent J.S., found 2-3 m to the right of the others.

Conquassation of the head

Conquassatio capitis

Gunshot wounds of the body

Vulnera sclopetaria corporis

Putrefaction of the body

Stadium putrefactionis

DECEDENT No. 2: I.I., aged 34

The cadaver is of a male dressed in shoes, socks, blue jeans, underpants, vest, shirt, sweater and overall jacket. The right ankle is bandaged. The decomposition is advanced and a large number of maggots (8-9 mm) is found. The head is destroyed; the left side is completely opened, the skull multiply fractured (Fig. 3b). The skull cavity is empty, with remnants of the grey-brown brain tissue and the dura on the bottom. Below the chin and to the right, an exit gunshot wound, measuring 22:10 mm, is found (Fig. 3a).

The left forearm is broken in the upper third of the ulna. A skin defect is found on the left arm. A defect measuring 3:2 cm is found in the umbilical region. A defect measuring 15:7 mm is found in the left gluteal region, and is directed upward. Another defect, measuring 3 mm in diameter, is found in the right lumbar region. Multiple lacerations of the intestine with a subsequent hemorrhage into the peritoneal cavity is found. Multiple fractures of the left pelvic bones near the hip joint are found.

In conclusion, the gunshot wound of the head is directed downward, forward and to the right, multiply fracturing the bones of the left temple and exiting on the right end of the lower jaw. Two gunshot wounds were found in the abdomen: one

in the left gluteal region, directed upward and forward, penetrating the pelvis and the intestine and exiting in the umbilical region, and the other in the right lumbar region, penetrating the intestine, and exiting in the umbilical region.

Pathoanatomical Diagnoses:

Gunshot wound of the head

Vulnus sclopetarium capitis

Conquassation of the head

Conquassatio capitis

Gunshot wounds of the abdomen and lower extremities

Vulnera sclopetaria abdominis et extremitatum inferiorum

Putrefaction of the body

Stadium putrefactionis

DECEDENT No. 3: M.P., aged 77

The cadaver is of an elderly male, dressed in a jacket, sweater, checked shirt, vest, underpants, woolen socks and shoes (Figs. 2 and 4a). A cane and a fur cap were found by the body. The right leg of the decedent is shorter.

Above the right ear, a circular defect measuring 12 mm is found, and the complete left side of the head is missing. The skin margin is dry (Fig. 4b). Multiple fractured fragments of the vault and the base of the skull are found. The brain tissue is completely missing.

On the back of the right thigh, a skin defect with ragged margins is found. The right femur is multiply fractured in its upper third. Near the broken bone, two fragments of the projectiles are found. The upper part of the right arm is in the

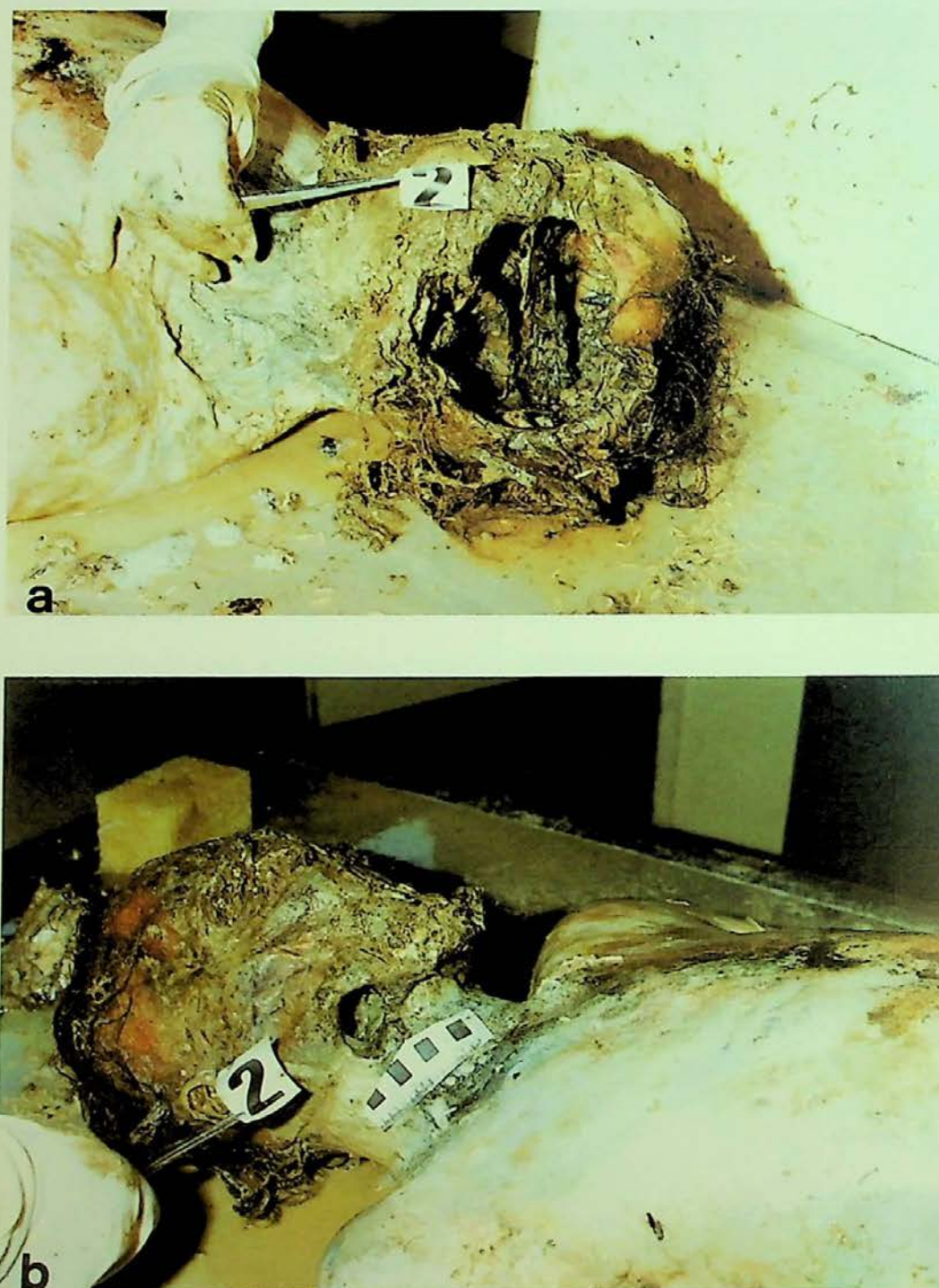


Figure 3. Decedent I.I. The exit (a) and the entrance (b) gunshot wounds of the head.

advanced stage of decomposition with large skin and bone defects. A fragment of a projectile is found in the wound. A large skin defect is found on the latero-posterior aspect of the right arm.

In conclusion, the death was caused by a gunshot wound of the head. Gunshot wounds of the right upper arm and the right thigh were also found. They were inflicted from the back of the body. The fragments of the projectile (RN 38 spe-

cial lead bullet) were found.

Pathoanatomical Diagnoses:

Gunshot wound of the head
Vulnus sclopetarium capitis

Gunshot wounds of the lower extremities
Vulnera sclopetaria extremitatum inferiorum

Putrefaction of the body
Stadium putrefactionis

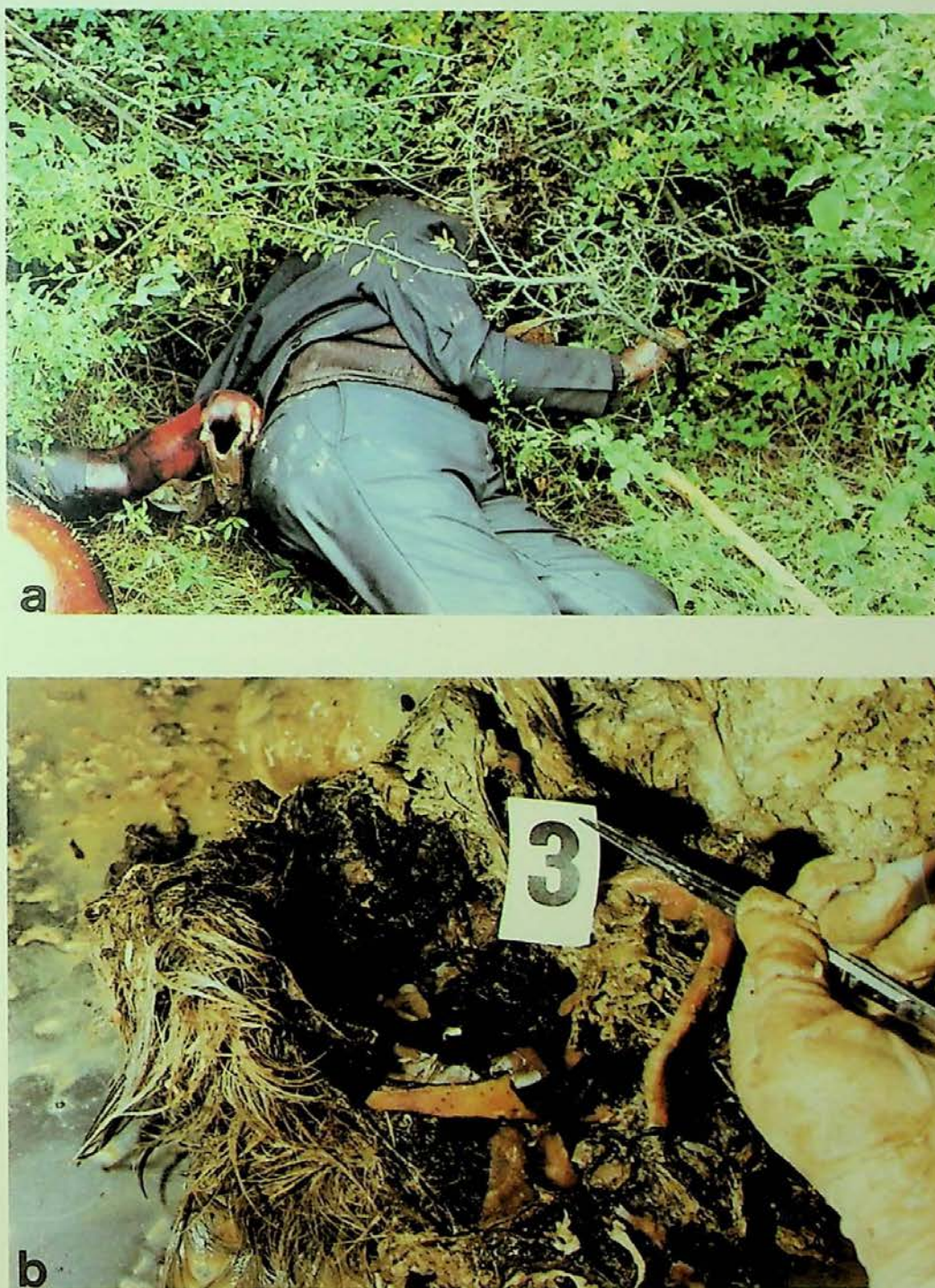


Figure 4. The body of the decedent M.P. (a) and the gunshot wound found on his head (b).

DECEDENT No. 4: S.K., aged 54

The cadaver is of a male dressed in leather shoes, socks, trousers and a T-shirt. The decomposition process is advanced, particularly on the legs and right lower abdomen, where parts of the intestine are protruding. The anterior abdominal wall is parchment-like. The head is medium sized, at the back of the scalp completely decayed. The skin is missing on the palms of the hands, and that on the dorsum is dark grey. The nose, lips and eyes

are dried up and hard. In the middle of the chin, a circular skin defect is found, underlying broken lower jaw. A similar defect is found on the tongue. In the depth of the oral cavity, fractured first and second cervical vertebrae are visible as a circular defect surrounded by bloody tissue. A large and deformed piece of lead is found beneath the skin of the nuchal region. The back of the neck is lightly suffused with blood.

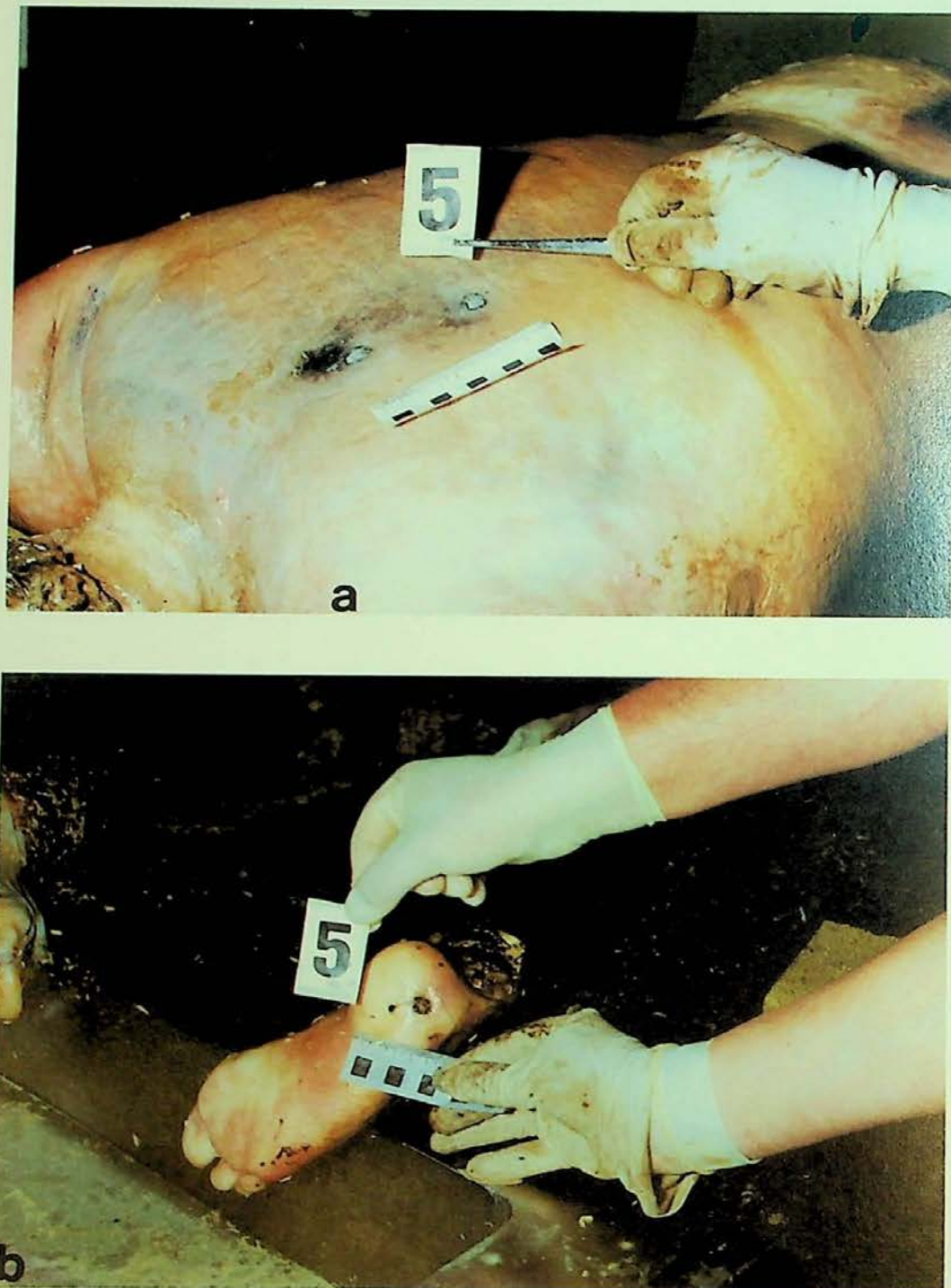


Figure 5. The decedent J.S. The entrance gunshot wounds of the back (a) and on the heel of the right leg (b).

On the right side of the chest, an oval entrance wound is found. In the lower part of the chest and the posterior aspect of the lumbar region, large skin defects with ragged margins are found.

A small amount of putrefied blood on the bottom of the thoracic cavity (approx. 500 ml). The beginning of the descending aorta is multiply lacerated. A small amount of blood is also found in the abdominal cavity, with the intestine and its

mesentery multiply lacerated. The lower part of the anterior abdominal wall and both thighs are in an advanced stage of decomposition and infested with a large number of maggots (8-9 mm).

In conclusion, the death was caused by a gunshot wound of the head penetrating the middle of the chin, breaking the lower jaw, the middle of the tongue, the upper part of the cervical vertebrae and the basis of the skull, where a piece of lead was found. Another gunshot wound was found on

the right side of the back, penetrating the muscles and ending in the spine. The projectile could not be recovered. Several gunshot wounds were found on the back but their number or directions could not be ascertained because of advanced putrefaction.

Pathoanatomical Diagnoses:

Gunshot wound of the head and cervical spine
Vulnus sclopetarium faciei et vertebrae cervicalis

Gunshot wounds of the chest and abdomen with consequent lesions of the aorta and mesentery

Vulnera sclopetaria thoracis et abdominis cum laesione aortae et mesenterii

Putrefaction of the body
Stadium putrefactionis

DECEDENT No. 5: J.S., aged 58

The cadaver is of a male dressed in blue jeans, checked shirt, vest, pullover, underpants, socks and leather shoes with rubber soles. The heel of the right shoe was perforated and a circular defect measuring 12 mm in diameter is found on the heel (Fig. 5b). The external examination and autopsy revealed multiple gunshot wounds on the head, trunk and extremities (Figs. 5a and 5b). The posterior part of the ankle is lacerated and the wound infested with maggots (8-9 mm); the bones can be palpated in the depth of the wound. The head is squashed, and the skin of the face multiply lacerated. The skull is multiply fractured. Parts of the dura, few broken teeth with steel crown and fragments of broken upper prosthesis are found in the cranial cavity.

In the middle of the back, between the shoulder blades, two skin defects are found, the lower one measuring 12 mm and the upper one 14:9 mm. The wound canals are directed upward and forward. Another defect is found on the back, measuring 25:12 mm and with a wound canal directed upward. A defect measuring 26:18 mm is found on the left shoulder, near the neck. Both femurs are fractured; three metal fragments are found in the right thigh. On the anterior part of the left thigh, at the fracture site, a deformed metal fragment is found. Several skin defects are found in the inguinal region. The defects are infested with a large number of maggots. In the left hemithorax, a lac-

eration of the left lung and a deformed projectile is found. A defect of the left side of the diaphragm is also found. The stomach, intestine, and mesentery are lacerated. Small amounts of blood are found in the abdominal cavity and the left hemithorax.

Patho-anatomical diagnoses:

Gunshot wounds of the body

Vulnera sclopetaria corporis

Conquassation of the head

Conquassatio capitis

Multiple fractures of both femurs

Fracturae multiplices femoris utriusque

Ruptures of the lung

Rupturae pulmonum

Putrefaction of the body

Stadium putrefactionis

Conclusion

Despite the advanced stage of decomposition, the autopsy of five decedents from Lovinac was completed both in respect to the cause and the manner of death.

Based on the autopsy findings and those obtained on the spot, it can be concluded that the decedents S.M., I.L., P.M. and K.S. were killed by close-range gunshots in the head, while the decedent J.S. was killed by rifle-fire while running off the place where the others were shot. Considering the number and gravity of the injuries, particularly those of the head, not even the most urgent medical help would have saved their lives. It can also be concluded that all gunshot wounds except that of the head were inflicted upon already dead bodies. Apart from the gunshot wounds, no other signs of mechanical or other violence could be detected. Considering the advanced decomposition of the cadavers and the length of the maggots (8-9 mm), the probable time of death was 8-9 days before the examination, i.e. on August 5 or 6, 1991.

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Civilian Massacres in Banija: Kraljevčani and Pecki

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Abstract. On August 14 and 16, 1991, Serbian extremists attacked two villages near Petrinja in the Banija region. The village of Kraljevčani was attacked on August 14, when the terrorists killed five elderly villagers, 3 women and 2 men, who stayed in the village to watch the livestock and the houses. The women were killed by automatic rifle fire and grenades, and the bodies of the two men were blown up by a hand rocket-launcher projectiles. On August 16, 1991, Serbian terrorists captured four villagers from Pecki, who came to the deserted village to feed the livestock left after the inhabitants had fled from the terrorists. The forensic medical expertise revealed that they were first wounded by rifle fire, then tortured and finally executed by hand-axes and bayonets.

Key words: civilians, Croatia, forensic expertise, massacres, war

MASSACRE IN KRALJEVČANI

Description of the Event

In spite of the Yugoslav Federal Army's promise to protect the villages in Banija, terrorists attacked Kraljevčani, Hrvatski Čuntić and Dragotinci, the villages near Petrinja, in the evening of August 14, 1991. Heavy mortar fire destroyed many houses and the civilians fled in panic. Five elderly men and women, all Croats, stayed in the village of Kraljevčani to feed the livestock and watch the houses. Under the protection of the Yugoslav Federal Army, Serbian terrorists looted the village and killed the civilians.

Forensic Findings

After the official investigator of the District Court in Sisak, Mr. J.B., had opened the inquest, the medico-legal expertise was performed at the Department of Pathology and Cytology in Sisak General Hospital on August 17, 1991. The following is a transcript of the relevant parts of the autopsy records (autopsy code: Kir. 334/91).

DECEDENT: A.Š.

Age: 55

External Examination: The cadaver is of a fatty, 163 cm-high female.

The putrefaction is advanced on the surface of the body, particularly on the head and neck, where a large number of maggots are found.

On the front side of the chest, just below the right costal arch by the sternum, five round entrance gunshot wounds are found, measuring 10-15 mm in diameter and lined up in a straight line. On the front side of the right lumbar region, other two entrance gunshot wounds are found. All exit gunshot wounds are found in the back and are a little larger than the entrance wounds.

An entrance gunshot wound is found in the posterior right cubital region, with the exit wound on the posterior side of the arm.

Entrance gunshot wounds are found in the middle of the abdomen and on the left thigh. The left thigh is deformed because of a multifragmented fracture of the femur.

In the middle of the left forearm, a defect of the soft tissue is found, measuring 10 cm. Multiple bone fractures are visible in the depth of the wound.

Cause of Death:

Gunshot wounds of the trunk
Vulnera sclopetaria trunci corporis

Opinion: The external examination of the decedent A.S. revealed that the death was homicidal, caused by multiple gunshot wounds of the chest and abdomen region. Five gunshot wounds were found on the chest, three on the abdomen, one in the right cubital region and one on the left thigh, involving multiple bone fractures.

All gunshot wounds were inflicted by projectiles fired in front of the decedent. Their position suggests that they were inflicted by automatic rifle fire. The defect in the middle of the right forearm was probably caused by a fragment of an explosive device.

DECEDENT: M.T.

Age: 68

External Examination: The cadaver is of a fatty, moderately tall female.

The putrefaction is advanced, especially in the upper part of the chest, the head and the neck. In the middle of the chest, a wide entrance explosive wound with ragged margins and measuring 12-15 cm is found. Broken ribs and lung tissue are protruding from the wound opening.

Cause of Death:

Explosive wound of the thorax
Vulnus explosivum thoracis

Opinion: The external examination of the decedent M.T. revealed that the death was homicidal, caused by a large explosive wound on the front side of the chest. The wound was characteristic of those inflicted by a fragment from an explosive device.

DECEDENT: M.P.

Age: ?

External Examination: The cadaver is of a very fatty, 160 cm high female. The putrefaction is advanced, especially on the upper and front parts of the trunk.

A defect, measuring 10 cm, is found on the lateral side of the left arm. The opening of the wound continues through the muscles and broken humerus and exits in the left armpit. The defect continues in the lateral side of the chest, where the lacerated lung tissue is protruding from the wound opening.

Cause of Death:

Explosive wound of the left side of the chest
Vulnus explosivum lateris sinistri thoracis

Opinion: The external examination of the decedent M. P. revealed that the death was homicidal, caused by an explosive wound of the chest with subsequent lung injury.

The entrance explosive wound, measuring approx. 10 cm, was found on the outer side of the upper third of the left arm. The defect continues on the chest region, where a lung laceration was found.

DECEDENT: N.P.

Age: ?

External Examination: The cadaver is completely destructed; only the head with the neck, a small part of the shoulder and lower extremities amputated in the middle of the thigh are found.

Cause of Death:

Explosive destruction of the body
Destructio explosiva corporis

Opinion: The destruction of the body of the decedent N.P. was inflicted by a very powerful explosive device. The findings from the site of death and the evidence of the relatives who found the bodies, suggest that the projectile was a hand rocket launcher shell.

DECEDENT: N.S.

Age: ?

External Examination: The head with the shoulders, a part of the chest and lower extremities with a part of the pelvis were found.

Cause of Death:

Explosive destruction of the body
Destructio corporis explosiva

Opinion: The same as for the decedent N.P.

MASSACRE IN PECKI

Description of the Event

Four civilians, all Croats, came back to the village of Pecki near Petrinja, to feed the livestock left after the inhabitants had fled in fear from terrorist attack. The terrorists captured and massacred them on August 16, 1991. Three of them were close relatives.

Forensic Findings

After the official investigator of the District Court in Sisak, Mr. J.B., had opened the inquest, the autopsy of the decedents was performed at the Department of Pathology and Cytology, Sisak General Hospital, on August 17, 1991.

The following is a transcript of the relevant parts of the autopsy reports (autopsy code: Kir. 335/91).

DECEDENT: S.H.

Age: 70

External Examination: The cadaver is of a 160 cm-high, thin male. The postmortem rigidity is present.

A bruise is found in the middle of the upper eyelid, as well as a small abrasion in the right tem-



Figure 1. Explosive destruction of the body of the decedent N.Š. from Kraljevacani.

Figure 2. Decedent M.H. from Pecki (aged 32, cause of death: gunshot wounds of the trunk and open fracture of the cranium). Large incision wound of the lower end of the right cheek, inflicted by an object with a sharp cutting edge (hand-axe).

Figure 3. Decedent D.H. from Pecki (aged 28, cause of death: multiple gunshot and incisive wounds). The left forefinger was sharply amputated and the left thumb crushed. The wounds were inflicted by an object with a sharp cutting edge (hand-axe).

Figure 4. Decedent I.B. from Pecki (aged 23, cause of death: multiple severe lesions). The left arm was sharply amputated by an object with a sharp cutting edge (hand-axe).

poral region. On the posterior side of the right half of the neck, an entrance gunshot wound is found. The exit wound is found more posteriorly, 8 cm from the entrance wound.

In the middle of the abdominal wall, an entrance gunshot wound is found, measuring approx. 10 mm in diameter. The exit wound, measuring 2 cm, is found in the back, at the same level as the entrance wound.

Below the right inguinal ligament, two entrance gunshot wounds are found, measuring approx. 10 mm and separated by approx. 6 cm. Two equidistant exit wounds are found in the upper part of the gluteal region. On the back of the lower third of both forearms and right carpal region, several longitudinal and semicircular excoriations are found. The little finger of the left hand was amputated at the unknown time in the past.

Pathoanatomical Diagnoses:

Gunshot wounds of the neck, abdomen and right thigh
Vulnera sclopetaria colli, abdominis et femoris dextri

Excoriations of both forearms and the right carpus

Excoriationes dorsi antebrachii utrisque et regionis carpalis dextrae.

Postamputation of the little finger of the left hand

Status post amputationem digiti minimi manus sinistrae

Cause of Death:

Gunshot wounds of the abdomen and pelvis
Vulnera sclopetaria abdominis et pelveos

Opinion: External examination of the decedent S.H. revealed that the death was homicidal, caused by gunshot wounds of the abdomen and pelvis.

Four gunshot wounds were found, one in the right half of the neck, one in the middle of the abdomen and two in the pelvis, beginning just below the right inguinal ligament.

All wounds were inflicted by projectiles fired from the front of the body.

The appearance and location of excoriations found on the forearms and right carpus suggest that the wounds were inflicted by human nails, as when grasping a hand and dragging a body.

DECEDENT: D.H.**Age:** 28**External Examination:** The cadaver is of a 168 cm-high, well built male.

Five cm long laceration with sharp margins, is found in the left temporo-parietal region.

An exit gunshot wound, measuring 5 cm and with protruding bone fragments, is found on the top of the left shoulder. The entrance wound is found on the inner side of the left arm. On the inner side of the left forearm, a grazing gunshot wound is found. The left forefinger is sharply and freshly amputated. A 6 cm-long laceration of the left thumb, with completely squashed bones, is found.

An entrance gunshot wound is found on the anterior side of the right foreleg, 28 cm from the soles of the feet. The wound canal is directed obliquely upward and penetrates the upper part of the foreleg and the knee, fracturing the bones. On the inner side of the right thigh, an entrance gunshot wound is found 60 cm from the soles of the feet. The exit wound is on the outer side of the right gluteal region, measuring 3-4 cm in diameter.

Pathoanatomical Diagnoses:

Gunshot wounds of the extremities

Vulnera sclopetaria extremitatum

Incisive wounds of the head and the right arm

*Vulnera saccata capitis et manus dextri***Cause of Death:**Multiple severe gunshot and incisive lesions
*Laesiones multiplices sclopetariae et saccatae***Opinion:** The external examination of the decedent D.H. revealed that the death was homicidal, caused by multiple gunshot and incisive lesions of the body.

Incisive wounds were found on the left hand, with the amputation of the left forefinger and destruction of the right thumb. Gunshot wounds of the left forearm and left shoulder with multiple bone fractures. The most severe gunshot wound was probably the one inflicted to the right thigh and gluteal region.

The appearance of the lacerations is characteristic of hand-axe or a similar heavy object with a sharp cutting edge. The gunshot wounds were inflicted by rifle fire to the front of the body.

DECEDENT: M. H.**Age:** 32**External Examination:** The cadaver is of a 165 cm-high, medium built male.

The head is deformed, the squamous part of the right temporal bone impressed and fractured, the skin lacerated. Squashed brain tissue is found in the upper part of the laceration. On the left side of the forehead, orbit and cheek, dark brown and dry abrasions are found. On the lower end of the right cheek, parallel to the lower jaw, a 9 cm-long and 1 cm-wide laceration is found. The wound

opens the oral cavity, so that the tongue and multiply fractured upper and lower jaw are visible.

Below the left armpit, two entrance gunshot wounds are found close to each other, measuring 10 mm in diameter. One exit wound is found near the left sternoclavicular joint, and the other on the posterior part of the shoulder. On the lateral aspect of the left abdominal wall, an entrance wound is found. This wound continues on the left arm, with the entrance wound on the back and the exit wound on the front side of the arm. The wound canal is directed upward.

A longitudinal, deep incision is found in the left metacarpal region, ending in the almost complete amputation of the thumb.

Pathoanatomical Diagnoses:Gunshot wounds of the trunk and extremities
Vulnera sclopetaria trunci corporis et extremitatum

Deep incision wounds of the left side of the face and the left hand

Vulnera saccata profunda lateris dextri faciei at manus sinistrae

Multiple open fractures of the right temporal bone

*Fractura complicata multiplex regionis temporalis dextrae***Cause of Death:**

Gunshot wounds of the trunk and open fracture of the cranium

*Vulnera sclopetaria trunci corporis et fractura complicata cranii***Opinion:** The external examination of the decedent M.H. revealed that the death was caused by multiple gunshot wounds of the trunk and opened fracture of the cranium.

Several gunshot wounds of the trunk and extremities, as well as deep incision wounds of the right side of the face and left hand were found. The incision wounds were inflicted by an object with a sharp cutting edge, such as hand-axe. The wounds in the right temporal region were the result of a heavy blow with a blunt object on the head firmly fixed to the ground. The blow caused multiple bruised abrasions and contusions on the prominent parts of the left side of the forehead and face.

DECEDENT I.B.**Age:** 23**External Examination:** The cadaver is of a 166 cm-high male.

The head is markedly deformed. In the middle of the forehead and on the right cheek, four smaller triangular incisions are found on each site. Below and in front of the left auricle, a triangular exit wound is found, measuring 15 mm in diameter. Careful examination reveals the entrance wound on the base of the right side of the neck. The right half of the lower jaw and the anterior part of the upper right alveolar arch with three

teeth broken and the bones are visible in the depth of the wound. A deep incision wound, measuring 7.5 cm, is found below and in the front of the right auricle.

In the middle of the left clavicle, there is a deep incision wound with fractured clavicle and ribs. In the middle of the chest, five shorter stabbing wounds were found.

Gunshot wounds are found in the upper part of the right arm and the lower third of the right forearm.

A stabbing wound is found in the lower region of the thumb, and the right forefinger is sharply amputated. Deep incision, measuring 8 cm, is found on the back of the hand. Another oblique incision, measuring 3 cm, is found on the back of the right hand, near the little finger.

On the front side of the right leg, a stabbing wound of the subcutaneous tissue is found, beginning just below the inguinal ligament (5:2 cm) and the ending (1.5:1 cm) 15 cm anteriorly.

A large soft bruise, measuring 15:10 cm, is found on the lower back. Beneath the bruise, a squashed vertebral column can be palpated.

The left arm is sharply amputated in the middle, loosely hanging on a piece of skin. An oval defect with sharp margins, angled superiorly is found in the thoracic projection of the amputation. Fractured ribs and lacerated lung tissue is protruding from the wound opening.

Pathoanatomical Diagnoses:

Stabbing and incision wounds and lacerations of the forehead, face, chest and extremities
Vulnera punctoscisa et saccata frontis at faciei, pectoris et extremitatum

Gunshot wounds of the neck and right arm
Vulnera sclopetaria colli et extremitatis superioris dextri

Multiple fractures of the lower jaw
Fractura multiplex mandibulae

Conquassation of the lumbar spine
Conquassatio columnae vertebralis lumbalis

Cause of Death:

Multiple severe injuries
Laesiones multiplices grave

Opinion: The external examination of the decedent I.B. revealed that the death was homicidal, caused by multiple severe injuries.

Several wounds were found, inflicted by different mechanisms: stabbing wounds in the region of the forehead, right face, middle of the chest; deep stabbing wounds of the right side of the neck and left thigh; incisions of the left clavicle and the right hand; and a complete amputation of the left arm. The arm was amputated with an object with a sharp cutting edge, such as axe. During the amputation, a deep incision wound was made in the lateral side of the chest. The lumbar part of the vertebral column was completely squashed, which could be the consequence of several blows, inflicted with a hard blunt object, such as rifle butt or the blunt end of an axe. The incision and stabbing wounds were probably inflicted by a bayonet, as indicated by the length and the entrance and exit wounds of the upper thigh.

Conclusion

The massacres in Kraljevacani and Pecki differ in the way in which the terrorists executed the civilians, but what they have in common is extreme brutality and savageness of the murderers.

In Kraljevacani, the body of one 55 year-old woman (A.S.) was shot with 10 bullets, and the body of her husband (N.S.) was blown up by a projectile of large caliber. Another couple, M.P. and N.P., were killed by grenades; the husband's body was completely destroyed.

The massacre in Pecki is particularly appalling, because the victims (three of them, M.H., S.H. and D.H., were close relatives) were first wounded by rifle fire and then executed by hand-axes and bayonets. Amputations of the arm and fingers and crushing of the head with heavy blunt object indicate that the intention of the terrorists was not only to kill the victims, but to enjoy in deliberate and slow destruction of human lives.

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Civilian Massacre near Podravska Slatina

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Abstract. Twenty one civilians, 5 women and 16 men, were found dead in their doorways and yards after Serbian terrorist attacked the village of Četekovac on September 3, 1991. The age of the decedents ranged from 18 to 91 years. The oldest victims were women (aged 63, 68, 72, 86 and 91). The wounds found on 19 decedents were characteristic of long-range gunshot wounds, with projectiles fired mostly from the back or/and the side of the body. The autopsy of one decedent revealed that he died from two stabbing wounds and that those were the only wounds inflicted to the body. The body of the other decedent was heavily carbonized so that the cause of the death or even whether he was alive when his body was set on fire could not be determined.

Key words: civilians, Croatia, forensic expertise, war crime

Description of the Event

On September 3, 1991, Serbian terrorists attacked the villages of Četekovac, Čojlug and Balinci, near Podravska Slatina in Slavonia. The attack lasted for eight hours. The terrorists entered the village and killed 2 policemen and 21 civilians left in the village. Most of the inhabitants fled their homes before the attack, and only those who could not or would not leave stayed in the village. All inhabitants have not been accounted for as yet, so it is possible that a number of them were taken as hostages.

Forensic Findings

After the official investigator of the District Court of Osijek, Mr. R. A., had opened the inquest, the autopsy of the decedents was performed at the Department of Pathology and Forensic Medicine, Osijek General Hospital. Table 1 presents a summary of general medico-forensic data on the dead civilians.

The data presented in Table 1 show that the age of the victims ranged from 18 to 91 years. Five of them were women. They were the oldest inhabitants of the village (age: 63, 68, 76, 82 and 91). The members of three different families were found. Because of the extensive carbonization of the body of the decedent J.B., the carboxyhemoglobin assay could not be performed to estimate if the decedent was alive when his body was set on fire, but it is indicative that the decedent was found in his yard while his house was left intact. The following are transcripts of the four characteristic autopsy records of the decedents M.S. (aged 36, found scorched in his yard), J.B. (aged 65, found stabbed with a sharp object), M.R. (aged 63, found with several gunshot wounds of the back), and R.V. (aged 91, the oldest victim, found with several gunshot wounds of the back). Characteristic cases are also documented by Figures 1-4.

DECEDENT NO. 1:

M.S., male, aged 36, autopsy code
Kir:1633/91;S-456/91

Table 1. Wound type and the cause of death of 21 civilians from Četekovac

Decedent	Age	Sex*	Wound type (number)	Direction of projectile**	Cause of death
J.T.	18	M	gunshot (3)	front; back	Gunshot wound of the neck <i>Vulnus sclopetarium colli</i>
M.M.	25	M	gunshot (4)	front	Gunshot wound of the head <i>Vulnus sclopetarium capitis</i>
A.K.	26	M	gunshot (6)	back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
M.S. ^a	28	M	gunshot (2)	side; back	Gunshot wound of the neck <i>Vulnus sclopetarium colli</i>
M.L.	32	M	gunshot (5)	side; back	Gunshot wound of the head, trunk and right forearm <i>Vulnera sclopetaria capitis, corporis et cruris dextri</i>
N.B.	34	M	gunshot (4)	side; front	Gunshot wound of the head <i>Vulnus sclopetarium capitis</i>
Z.P.	36	M	gunshot (3)	side; back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
M.S.	36	M	carbonized body		?
M.R. ^b	42	M	gunshot (7)	side; back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
I.B.	48	M	gunshot (4)	side, back	Gunshot wounds of the chest and abdomen <i>Vulnera sclopetaria thoracis et abdominis</i>
M.R.	59	M	gunshot (1)	back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
F.S. ^a	59	M	gunshot (1)	back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
J.B.	63	M	gunshot (1)	front	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
M.R. ^a	63	F	gunshot (7)	side; back	Gunshot wounds of the chest, abdomen and left arm <i>Vulnera sclopetaria thoracis, abdominis et manus sinistri</i>
J.B.	65	M	stabbing (2)	side	Stabbing wound of the right side of the neck and chest <i>Vulnus punctum colli et hemithoracis lateris dextri</i>
I.B. ^c	66	M	gunshot (1)	front	Gunshot wound of the abdomen <i>Vulnus sclopetarium abdominis</i>
I.R. ^b	68	M	gunshot (1)	back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
M.M. ^a	68	F	gunshot (7)	side; front	Gunshot wounds of the trunk, head and right arm <i>Vulnera sclopetaria corporis, faciei et manus dextri</i>
I.B. ^c	76	F	gunshot (2)	front	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>
T.T.	82	F	gunshot (4)	side	Gunshot wound of the neck <i>Vulnus sclopetarium colli</i>
R.V.	91	F	gunshot (3)	side, back	Gunshot wound of the chest <i>Vulnus sclopetarium thoracis</i>

* M - male; F - female

** Aspect of the body where entrance gunshot wounds were found

^{a, b, c} Members of the same family

External Examination: The cadaver is almost completely carbonized, only the forelegs and the left thigh are intact. On the forelegs, the remnants of green trousers and high black rubber boots are found. The identity of the decedent was established by his relatives.

The head *in toto* and particularly the soft tissues are carbonized. An oval bone defect measur-

ing 5:3 cm is found in the occipital region. The margins of the defect are dark brown, the bone crumbles easily. The cerebellum is completely and the cerebrum partly preserved. The brain tissue is white-grey and firm, as if boiled. On cut surface the cerebral structure is visible. The structure of the right cerebellar hemisphere is barely visible and that of the left is preserved on cut surface.



Figure 1. Decedent M.R. (female, aged 63, cause of death: gunshot wounds of the chest, abdomen and left arm). Five entrance long range gunshot wounds are found on the back.

The arteries are medium sized, and the intima is smooth. On the right side of the cranial vault and base, between the dura and the bone, a layer of 1-2 mm thick, red-brown and fatty material is found. The fatty material covers most of the middle and posterior cranial fossa. Some of the material is also found on the pia over the right temporal lobe. Two fractures of the skull base are found in the middle cranial fossa. One is directed over the large wing to the body of the sphenoid bone. The other continues over the smaller wing of the sphenoid into the anterior cranial fossa. The bone of the cranial vault and the temporal part of the base is thin, dark brown, very fragile and fragments on touch.

The neck is carbonized and the anatomical structures cannot be recognized.

In the front, a part of the chest wall is found, consisting only of the sternum, rib parts and carbonized internal organs. On the back, only posterior parts of the ribs are found. In the thoracic cavity, the heart and the lungs are found. The heart is small, the muscle is firm and rigid. Both lungs are small, the pleura is smooth, and the parenchyme is hard, rigid and grey-brown.

The abdominal wall is completely missing, except for the liver. The liver is small, on cut surface the parenchyme is hard, rigid and dark-brown.

Right arm, forearm and hand are missing. Only a small, carbonized proximal end is left. The musculature is fragile and the bone chips easily. The left arm is carbonized. The left forearm and

the hand are intact, covered with dark brown skin. Both legs are carbonized. The pieces of carbonized muscles and femurs crumble easily. Both forelegs are intact, with preserved anatomical structures. The skin is pale, and the musculature brown red.

Additional Analyses: The whole heart and parts of skeletal musculature are taken for the carboxyhemoglobin analysis.

Opinion: The external examination and the autopsy of the decedent M.S. revealed an extensive carbonization of the body, so that possible injuries could not be determined. A thermal hematoma and several fractures on the hematoma sites were found in the cranial cavity. The fractures were caused by thermal reaction.

The carboxyhemoglobin could not be assayed in the sample of the cardiac muscle because of extensive carbonization.

Due to extensive carbonization and thermal effects on the organs and skeleton, it was not possible to determine the traumatic injuries or to establish whether the body came into contact with fire during life.

DECEDENT NO. 2:

J.B., male, aged 65, autopsy code
Kir:1633/91;S-451/91

Pathoanatomical Diagnoses:

Stabbing wounds of the neck and chest
Vulnera punctata colli et thoracis



Figure 2. Decedent T.T. (female, aged 82, cause of death: gunshot wound of the neck). On the left side of the neck, a large exit gunshot wound is found, measuring 8.6 cm.

Skin excoriations of the right side of the face and the neck and left elbow

Excoriationes cutis faciei et colli lateris dextri, cubiti sinistri

Excoriation and hematoma of the chest

Excoriatio et hematoma thoracis

Fracture of the sternum

Fractura sterni

Generalized atherosclerosis, medium grade

Atherosclerosis universalis gradus medii

Putrefaction of the body

Stadium putrefactionis

Cause Of Death:

Stabbing wound of the right side of the neck and chest with subsequent hemorrhage in the right hemithorax

Vulnus punctatum colli et hemithoracis lateris dextri cum haematothorax lateris dextri

Opinion: The external examination and the autopsy of the decedent J.B. revealed that the death was homicidal and caused by a stabbing wound of the right side of the neck and chest.

The external examination revealed and several excoriations of the right side of the chin and neck, left elbow and chest. A circular hematoma with underlying muscle damage and broken sternum at the level of the 5th rib were found on the site of the excoriation on the chest. A stabbing wound was found on the right side of the neck. The wound canal was directed downward, backward and to the left, penetrating the musculature

and blood vessels of the neck and the first intercostal space, so that the first two ribs were cut. The canal entered the thoracic cavity and ended in the apex of the right lung. Approx. 1000 ml of putrefied blood was found in the right hemithorax. The wound was inflicted by a sharp object, such as a knife or a bayonet.

A stabbing wound of the left side of the neck was also found, similar to the one on the right side, directed through the neck musculature and between the ribs and right scapula, without bone defects. The wound was inflicted by the same object as the first one.

An excoriation and a hematoma shaped as a round object were found on the chest. Extensive haemorrhage into the muscles and the fracture of the sternum were found. The wound was inflicted by a round object measuring 10 m in diameter. The force used was moderate to great.

The decedent was alive when the injuries were inflicted and death was rapid.

The stabbing wounds, excoriations and sternal fracture were inflicted by a cold weapon used at a close range.

DECEDENT NO. 3:

M.R., female, aged 63, autopsy code Kir:1633/91;S-445/91

Pathoanatomical Diagnoses;

Gunshot wound of the chest, abdomen and the left arm



Figure 3. Decedent J.B. (male, aged 65, cause of death: stabbing wound of the neck and right hemithorax). The elongated puncture wound with sharp margins is found in the right supraclavicular region. The small contusion and hematoma found medially and above the puncture wound suggests that the wound may have been inflicted by a bayonet.

Vulnera sclopetaria thoracis, abdominis et manus sinistri

Hemorrhage into the peritoneal cavity
Haematoperitoneum

Cause Of Death:

Gunshot wounds of the chest, abdomen and the left arm

Vulnera sclopetaria thoracis, abdominis et manus sinistri

Opinion: The external examination and the autopsy of the decedent M.R. revealed that the cause of death were multiple gunshot wounds of the trunk and the left hand, with consequent extensive bleeding.

The gunshot wound of left gluteal region penetrates the gluteal musculature and ends in the left iliac wing. The wound canal was directed forward.

The gunshot wound beginning in the left gluteal region (entrance gunshot wound, No. 2) is directed forward and to the left, and penetrates the gluteal musculature and fractures the left iliac wing.

The gunshot wound beginning above the right gluteal muscle (entrance gunshot wound No. 4) is directed forward, upward and to the left, and penetrates the lumbar vertebrae, right renal fatty capsule, pancreas and duodenum, with consequent hemorrhage into the peritoneal cavity.

The gunshot wound of the back, beginning in the right scapular region (entrance gunshot wound No. 6) and exiting in the left scapular region (exit gunshot wound No. 7) is directed upward and to the right. The wound canal fractures the right scapula and the bodies and spinous processes of the 5th and 6th thoracic vertebrae with contusion of the spinal cord.

Grazing gunshot wounds are found in the right scapular and gluteal region.

The gunshot wound beginning on the left arm (entrance gunshot wound No. 10) penetrates the arm musculature and the left pectoral muscle. The exit gunshot wound is designated as No. 11 on the scheme.

The decedent was alive when the injuries were inflicted, and the death was rapid.

The death was homicidal.

DECEDENT NO. 4:

V.R., female, aged 91, autopsy code
Kir:1633/91;S-448/91

Pathoanatomical Diagnoses:

Gushot wound of the chest
Vulnus sclopetarium thoracis

Multiple fracture of the right humerus
Fractura comminutiva humeri dextri

Gunshot wound of the neck
Vulnus sclopetarium colli



Figure 4. Carbonized body of the decedent M.S. (male, aged 36, cause of death: unknown).

Multifragmented fracture of the 8th thoracic vertebra

Fractura comminutiva vertebrae thoracalis VIII

Rupture of the lower lobe of the left lung

Ruptura lobi inferioris pulmonis sinistri

Traumatic rupture of the thoracic aorta

Ruptura traumatica aortae thoracalis

Generalized atherosclerosis, medium grade

Atherosclerosis universalis gradus medii

Cause Of Death:

Gunshot wound of the thorax

Vulnus sclopetarium thoracis

Opinion: The external examination and autopsy of the decedent R.V. revealed that the death was caused by gunshot wound of the thorax, which ruptured the aorta and caused massive hemorrhage into the thoracic cavity.

The external examination revealed an entrance gunshot wound on the frontal part of the right hemithorax, 130 cm from the soles of the feet and 8 cm from the midline. The wound was oval, with the contusion band wider on the upper left margin. The wound canal penetrated the subcutaneous tissue and muscles of the chest, fractured the right humerus and made the exit on the outer side of the right arm. The exit gunshot wound measured 17.6 cm and the wound canal was directed backward, downward and to the right. The wound was characteristic of a long-range gunshot wound.

On the left side of the chin, an entrance gunshot wound with a contusion band, measuring 0.9

cm, was found. The wound canal was directed downward and to the left through the subcutaneous tissue below the chin, and made the exit on two irregular wounds on the left side of the neck.

An entrance gunshot wound with a contusion ring, measuring 1 cm, was found on the back, 117 cm from the soles of the feet and 7 cm to the left from the midline. The wound canal entered the thoracic cavity, penetrated the lower lobe of the left lung, thoracic aorta and thoracic spine, where it ended. The direction of the canal was downward, forward and to the right. The wound is characteristic of a long-range gunshot wound.

Conclusion

The killing of 21 villagers in Četekovac by Serbian terrorists was a deliberate massacre of civilians. The victims were found in their doorways and yards, shot from the back or side, half of them were elderly persons (more than 59 years of age) and five of them women - it is not likely that they have been using firearms at the time of death. Shooting a 91 year-old woman, executing a 65 year-old man by stabbing and setting a 36 year-old man on fire, are the crimes of unprecedented brutality and ruthlessness.

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Person Displacement Pattern in Croatia

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Abstract. A lot of causal and stochastic factors have been involved in the person displacement in Croatia during the last two months. The objective of the study was to recognize the existence of the displacement patterns and to explain them according to events. The number of registered displaced persons, collected daily at the Committee for Refugees of Croatia, from July 7 to September 26, 1991, was the source of data. The number of displaced persons was analyzed according to their place of residence ("displacement from") and the place of displacement ("displacement to"). The data are graphically presented as time series and the curves clustered according to their shapes. According to "displacement from", 7 patterns were recognized, whereas 4 patterns were identified as clusters according to "displacement to". The total number of persons registered during the study period is presented as surface maps. The clear-cut patterns of displacement strongly suggest that the curve patterns displaying time and space fluctuations of displaced persons was event-driven.

Key words: Croatia, displaced persons, pattern recognition, refugees, time series, war

Introduction

Recognition can be defined as the identification of an object as a member of a family which we already know or are familiar with, i.e. by reducing many to one (1).

The person displacement occurring in Croatia during July, August and September of 1991 represents a problem determined by many causal (2) and stochastic factors. War and persecution appear as causal factors that could be easily measured, but their effects are confounded by other, neither predictable nor observable, factors.

In this study, several displacement patterns of Croatian population are described and an explanation is provided, based on the events in Croatia.

Population and Methods

The data presented in the study were derived from the number of displaced families and persons

registered at regional centers and aggregated daily at the Committee for Refugees, Republic of Croatia, from July 7 till September 26, 1991.

According to the International Humanitarian Law, the term "displaced person" can be defined as a person who fled from the armed conflict or other disturbances but remains inside his country (3,4).

In this report, displaced persons were analyzed according to the place of residence ("displacement from") and the place they had arrived in ("displacement to"). Data on "displacement from" were calculated as rates per thousand inhabitants of a given community according to the 1991 Census (5). It should be pointed out that the population of displaced persons have been under-reported because of temporary war circumstances in Croatia.

The data are graphically presented as time series (6,7). The curves were clustered according to

their shapes in order to recognize the possible underlying pattern.

A global view of the final number of registered persons in the studied period is presented as surface maps (8).

Results

The results are presented in thirteen figures and two tables.

Figure 1 shows the general trend of displacement in the whole Croatia during the observed pe-

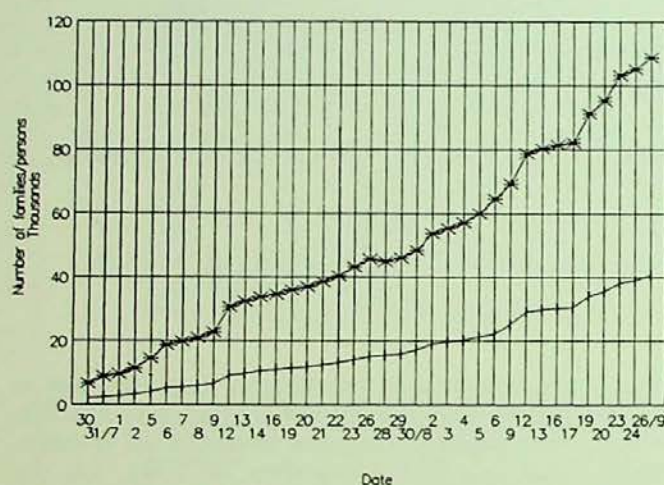


Figure 1. Number of displaced families and persons in Croatia registered from July 30 to September 26 1991. Vertical bars represent the number of families and the asterisks the number of persons.

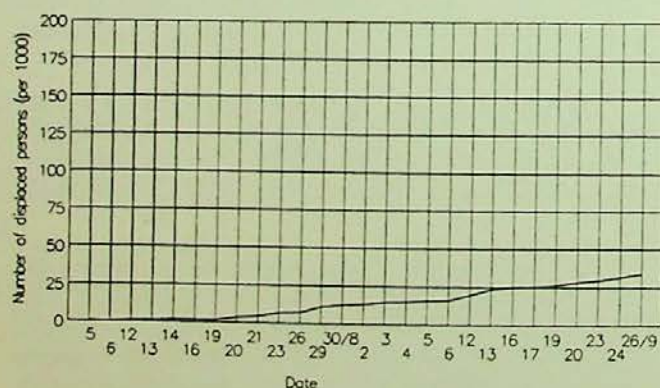


Figure 2. Registered displaced persons from the community of Novska per 1000 inhabitants from July 30 to September 26, 1991.

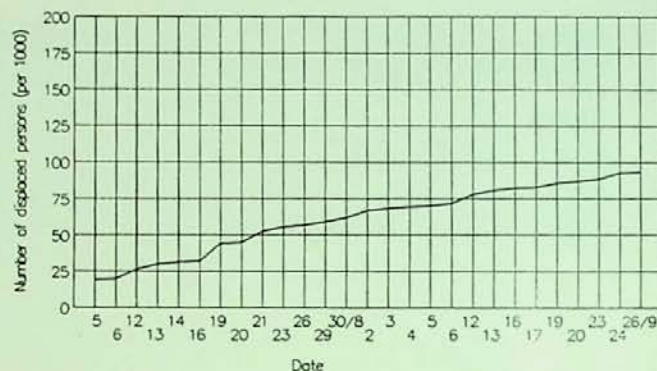


Figure 3. Registered displaced persons from the community of Osijek per 1000 inhabitants from July 30 to September 26, 1991.

riod of time, with a constant increase in the number of displaced persons and families.

According to "displacement from", seven types of patterns could be recognized as clusters.

Cluster 1 is characterized by a very low rate of displacement (below 1 per 1000), including the following communities: Biograd, Bjelovar, Čakovac, Delnice, Donji Lapac, Donji Miholjac, Duga Resa, Đakovo, Garešnica, Karlovac, Kaštela, Križevci, Kutina, Našice, Pag, Rijeka, Slavonska Požega, Slavonski Brod, Split, Titova Korenica, Trogir, Valpovo and Županja.

Cluster 2, characterized by a moderate but steady increase, includes the communities of Dvor, Gračac, Grubišno Polje, Nova Gradiška, Novska, Obrovac and Sisak. The rates of displaced persons in Novska are shown in Figure 2.

Cluster 3 is similar to cluster 2 but the increase in the rates of displaced persons is greater. The cluster includes the communities of Hrvatska Kostajnica, Vrginmost and Osijek. Data on Osijek

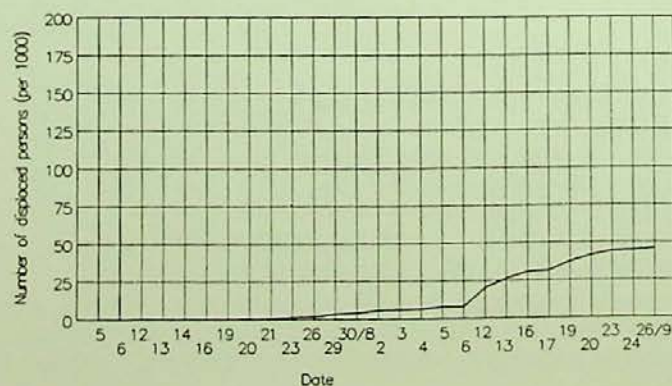


Figure 4. Registered displaced persons from the community of Podravska Slatina per 1000 inhabitants from July 30 to September 26, 1991.

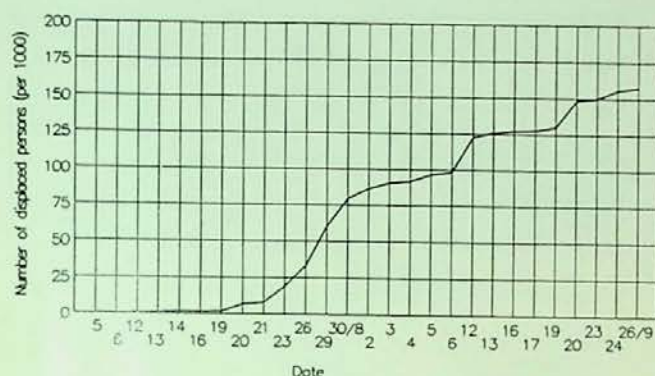


Figure 5. Registered displaced persons from the community of Beli Manastir per 1000 inhabitants from July 30 to September 26, 1991.

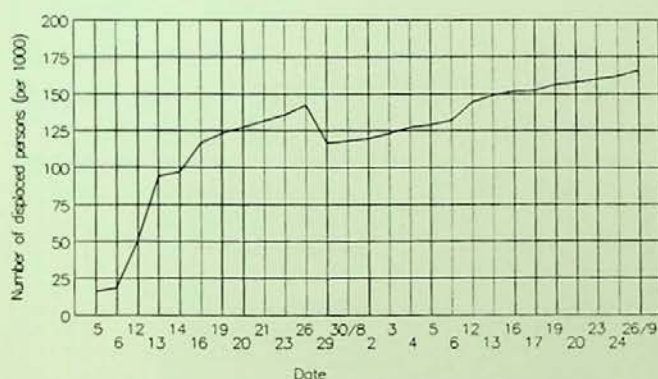


Figure 6. Registered displaced persons from the community of Vukovar per 1000 inhabitants from July 30 to September 26, 1991.

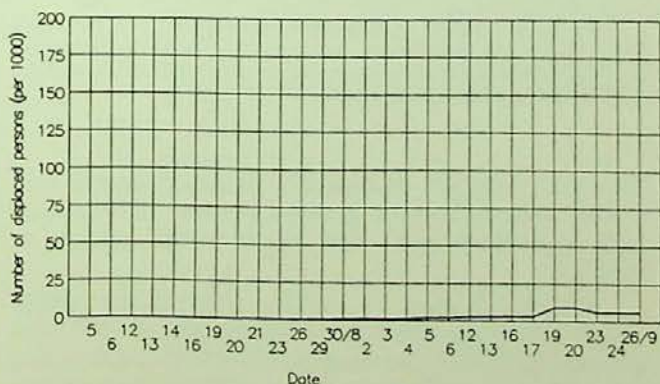


Figure 7. Registered displaced persons from the community of Virovitica per 1000 inhabitants from July 30 to September 26, 1991.

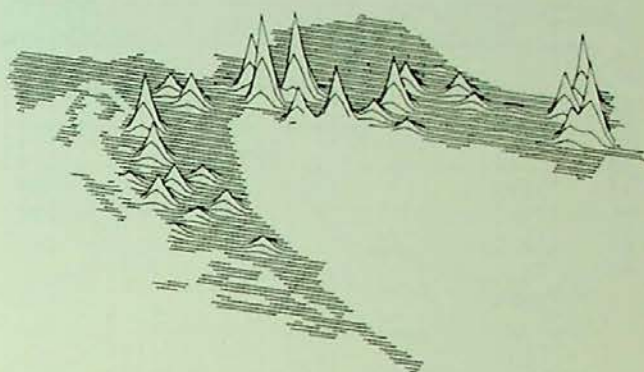


Figure 8. Surface map of places of residence ("displacement from" areas) of the registered displaced persons in Croatia on September 26, 1991.

are shown in Figure 3 as a representative of this cluster.

The communities of Benkovac, Daruvar, Drniš, Gospić, Knin, Ogulin, Orahovica, Pođavska Slatina, Sinj, Šibenik, Vojnić and Zadar were grouped in cluster 4, described by a steady moderate increase followed by a sharper increase in the rates of displaced persons. Figure 4 shows data on Pođavska Slatina as a representative of this cluster.

Cluster 5 may be called "jumping cluster". It is characterized by a cascading increase in the rates. The communities of Beli Manastir, Glina, Otočac and Pakrac belong to this cluster. Figure 5 shows data on Beli Manastir, as a representative of the cluster.

Cluster 6 is described by a continuous increase with temporary decreases in the rates of displaced persons. The communities of Petrinja, Slunj, Vinkovci and Vukovar belong to this cluster. Figure 6 shows the data on Vukovar.

The community of Virovitica could not be classified in any of the above clusters and was designated as Cluster 7. Its specificity is an almost complete absence of any trend, except for a small temporary increase in the rates of displaced persons.

Apart from the clusters described, referring to the movement of Croatian citizens, there is also a number of people displaced from some other Yugoslav republics, as presented in Table 1.

Figure 8 shows a surface map of "displacement from" areas in Croatia on September 26, 1991. The number of displaced persons is presented as a rate per 1000 inhabitants of a given community.

According to "displacement to" (the place of displacement), four types of patterns could be recognized.

Cluster 1 is characterized by a steady and steep increase in the number of displaced families and persons, such as at the registration centers in

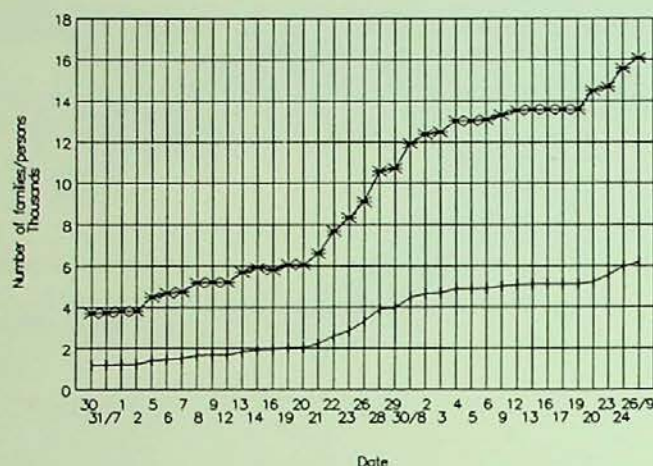


Figure 9. Number of displaced families and persons registered at Osijek registration center from July 30 to September 26, 1991. Vertical bars represent the number of families and the asterixes the number of persons.

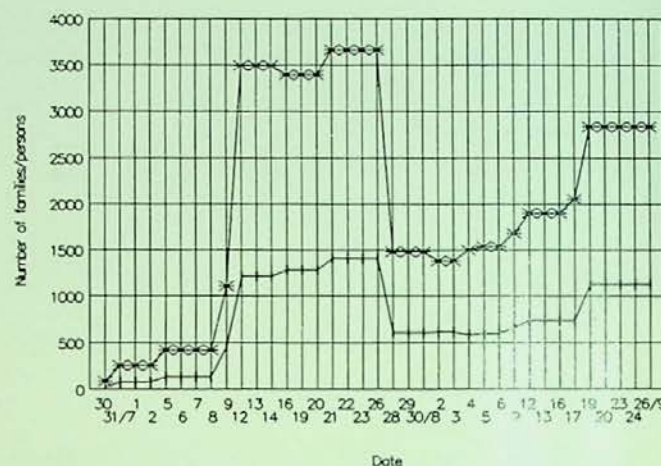


Figure 11. Number of displaced families and persons registered at Pula registration center from July 30 to September 26, 1991. Vertical bars represent the number of families and the asterixes the number of persons.

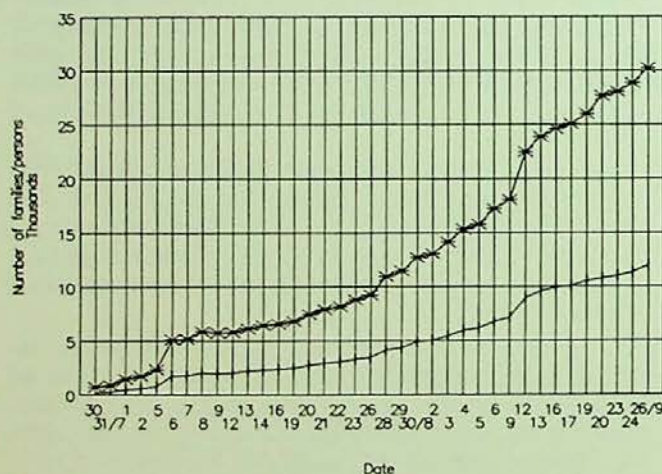


Figure 10. Number of displaced families and persons registered at Zagreb registration center from July 30 to September 26, 1991. Vertical bars represent the number of families and the asterixes the number of persons.



Figure 12. Number of displaced families and persons registered at Bjelovar registration center from July 30 to September 26, 1991. Vertical bars represent the number of families and the asterixes the number of persons.

Osijek, Varaždin and Zagreb. Figures 9 and 10 show Osijek and Zagreb as cluster representatives.

Cluster 2 is characterized by a continuous increase in the number of displaced families and persons, interrupted by a sharp decrease in the middle of the period and followed by a slower increase towards the end of the period. Registration centers in Dubrovnik, Karlovac, Pula, Split and Rijeka belong to this group. Figure 11 shows data on the persons displaced to Pula.

Cluster 3 is characterized by an increase in the number of families and persons displaced to a certain place, followed by few sharp increases in this number. Registration centers in Bjelovar,

Darugar, Gospić, Makarska, Sisak, Šibenik and Zadar belong to this group. Figure 12 presents data collected from the registration center in Bjelovar.

Figure 13 shows a surface map of the places where Croatian citizens were displaced on September 26, 1991. The number of displaced families and persons registered by regional registration centers on September 26, 1991 is presented in Table 2.

Discussion

The distinctive patterns of displacement in Croatia indicate the pattern of curves displaying

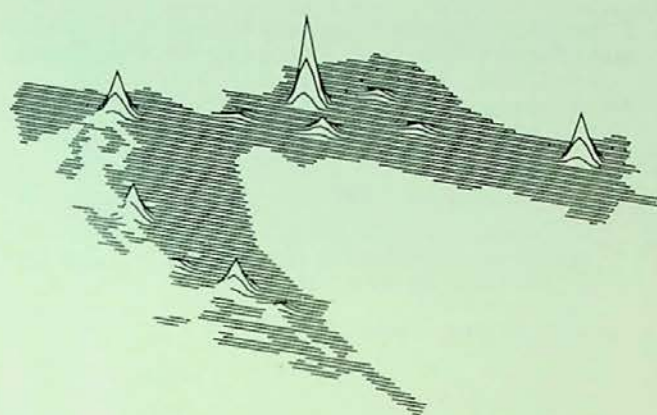


Figure 13. Surface map of places of displacement ("displacement to" areas) of the registered displaced persons in Croatia on September 26, 1991.

Table 1. Number of registered families and persons displaced to Croatia from other Yugoslav republics on September 26, 1991.

Republic	Community	No. of families	No. of persons
Bosnia and Hercegovina	Banja Luka	3	8
	Bihać	0	1
	Bosanski Brod	1	3
	Bosanska Dubica	4	8
	Bosanska Gradiška	11	34
	Bosansko Grahovo	9	18
	Bosanska Kostajnica	11	27
	Bosanski Novi	2	9
	Lištica	1	1
	Livno	4	36
	Prijedor	3	9
	Prozor	4	8
	Sarajevo	3	10
	Velika Kladuša	1	1
Montenegro	Zenica	0	2
	Zvornik	1	1
Montenegro	Tivat	1	3
Macedonia	Skopje	0	1
	Štip	0	1
Serbia	Beograd	6	14
	Čuprija	1	4
	Pančevo	1	4
	Paraćin	0	1
	Pirot	0	1
	Titovo Užice	1	2
	Zemun	2	5
	Indija	2	4
Serbia - Voivodina	Novi Sad	5	2
	Ruma	3	7
	Sombor	5	15
	Sremska Mitrovica	13	41
	Stara Pazova	2	3
	Šid	13	42
	Titov Vrbas	1	3
	Lipljan	2	5
Serbia - Kosovo	Priština	2	9
	Vitina	1	7

Table 2. Number of displaced families and persons registered at registration centers on September 26, 1991

Registration Center	No. of Families	No. of Persons
Bjelovar	860	2392
Daruvar	1151	2288
Dubrovnik	173	539
Gospić	41	166
Karlovac	568	1531
Makarska	622	2127
Osijek	6180	16069
Pula	1130	2836
Rijeka	5313	14449
Sisak	2036	5169
Split	3217	9857
Šibenik	888	2398
Varaždin	2715	7437
Zadar	3768	11305
Zagreb	12006	30239
TOTAL	40668	108802

time and space fluctuations of displaced persons to be strongly event-driven (1). Vukovar is a typical example of the event-driven pattern of the "displacement from" curve. The first abrupt decrease was observed at the end of August, just before the beginning of the new academic year. At that time, on August 25-26, the air and artillery attacks on Vukovar intensified (2). Therefore, a decrease in the rates of displaced persons was registered at the beginning, and their increase after the end of this period.

Pula is a typical example of the event-driven behavior of the "displacement to" curve. The first steep increase was observed at the beginning of August, after mass mobilization had taken place in Serbia and large military units had been positioned along the Croatian border (2). The second sharp increase was observed in the middle of August, probably related to the severe artillery attacks on Vinkovci, Vukovar, villages in the Zadar inland, Banija, Osijek, Gospić, villages in the Šibenik inland and in western Slavonia (2).

Although predictions in time series are inconvenient, in this case very similar if not identical patterns of displacement, triggered by determined conditions, should be expected in the future.

A decision support system dealing with displacement problems should be developed. Patterns and their causes recognized so far are inadequate as a basis for the development of such a system. Gravitation and intention tendencies data are required.

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Deliberate Military Destruction of the General Hospital in the City of Osijek

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Abstract. The Osijek General Hospital was founded in 1739. Today, it serves medical needs of approximately 960,000 inhabitants of eastern Croatia. It has 1606 hospital beds and 2508 employees of which 332 are doctors. During the war of Serbia and the Yugoslav Federal Army against Croatia, in the time period from June 27 to September 1991, the Hospital was attacked from the neighboring Army garrison. The garrison was just across the street, at a distance of 50-100 meters. The heaviest attacks occurred between September 14 and September 17, 1991. At that time, the Hospital was hit 56 times by mortar shells, 21 times by tank shells, 17 times by rockets from multiple rocket launcher, and many times by bullets from light weapons. Direct fire killed one and wounded three persons working at the Hospital.

Key words: Croatia, destruction, hospital, war

Introduction

The General Hospital in Osijek is the largest and central medical institution of the regions of Slavonia and Baranya in north-eastern Croatia. Although research into the history of medicine in Slavonia and Baranya has not yet been completed, numerous data available indicate that the present-day General Hospital at Osijek traces its origin to a medical unit founded in 1739 when the region was hit hard by an outbreak of the plague epidemic (1). Thus, the Hospital boasts a 250-year tradition. It is interesting to note that the journal considered to be the first professional medical journal in Croatia, *Glasnik društva slavonskih liječnika* (Herald of the Society of Slavonian Physicians) was first published here in Osijek in 1877 (2). This shows that the General Hospital in Osijek has traditionally played an important role in the development of both medical profession and medical research. Today, this Hospital is also a branch of the Zagreb University School of Medi-

cine and some of its wards (Internal Medicine, Psychiatry and Neurology) are at the same time clinical departments of the School of Medicine. Since 1980, the Osijek General Hospital has been the seat of the Scientific Unit for Clinical and Medical Research of Slavonia and Baranya. It is also well known as the publisher of the medical journal *Medicinski vjesnik* (Medical Herald) (3,4).

Until the Croatian war of 1991, the Osijek General Hospital with its clinical wards and specialist services served the needs of 960,000 or so inhabitants of the region. At the beginning of 1991, the Hospital had 1606 hospital beds and 2508 employees of which 332 were MDs. Architecturally, the Hospital consists of several connected pavilion-type buildings.

Besides claiming human lives, the 1991 war in Croatia, in which the Republic of Croatia has been attacked by the Federal Army (the so-called Yugoslav National Army) and Serbian irregular troops, has also resulted in devastation of material properties and cultural monuments, and is charac-



Figure 1. Shell-pierced southern wall of the Pediatrics Ward.



Figure 2. Shell-pierced surgery at the Neurology Ward.



Figure 3. The hall in the Radiology Ward leading to the CT room damaged by a rocket from a multiple rocket launcher.



Figure 4. Patient room at the Psychiatry Ward.



Figure 5. Southern side of the Gynecology Ward after being hit by a rocket from a multiple rocket launcher.

terized by great ferocity and numerous violations of even those tenuous international norms that attempt to alleviate the horrors of war (5,6). The violations also include the destruction of medical institutions, i.e. in Vinkovci, Vukovar, Gospić, Pakrac, etc.

This paper reports on the deliberate military destruction of the General Hospital in Osijek during the period from June 27 to September 1991.

Facts

The Hospital was first attacked by the Federal Army on June 27, 1991 from the *Milan Stanivuković* Garrison which is at some 50 m across the Hospital. On that occasion, gunfire was opened at demonstrators gathering around the garrison. Seventeen persons, mostly children and youth, were injured. The Hospital building was damaged many times by rifle bullets.

On September 13, 1991, a strong attack was launched on Osijek and, as it is evident from the description which follows the Osijek General Hospital was one of the main targets. The attack continued for four days, until September 17.

Except for the usual security staff, there were no special Croatian armed forces or stocks of arms stationed at the Hospital.

The Federal Army representatives had not warned the medical staff of the coming attack.

In the attacks from September 14 to September 17, 1991, the Hospital was hit:

- 56 times by mortar shells,
- 21 times by tank shells,
- 17 times by rockets from multiple rocket launcher,
- many times by bullets from light weapons.

One nurse was killed (D.P., 38 years, mortar shells and glass fragments) and two doctors (both females: M.D., 28 years, leg injury caused by mortar shells and S.O., 28 years, abdominal injury, mortar shells accompanied by damage to the external iliac artery and rectum) and the porter (K.Z., 28 years, abdominal injury by mortar shells accompanied by damage to the rectum) were injured.

Owing to prompt evacuation of the patients to shelters, the patients were saved from being killed or injured.

The following is a brief description of the damage different Hospital wards suffered in the attacks.

Pediatrics: a direct shell-hit left a crater in the southern wall of the building.

From the east, the building was hit by several rockets from a multiple rocket launcher. Near the entrance to the Pediatrics Surgery, a mortar shell exploded. The hall of the Premature Infants Ward is completely destroyed and damaged by fire (Fig. 1).

Neurology: A shell hit the roof truss. One shell hit a window from across the garrison and shelled to pieces the out-patient clinic of the Neu-



Figure 6. Waiting room in front of the outpatient clinic at the Gynecology Ward.



Figure 7. Facade of the new building of the Surgery Ward across the garrison.

rology Ward (Fig. 2). The southern side of the building is scarred by bullets from light weapons. Patients rooms are destroyed and windows broken.

Radiology: A rocket from a multiple rocket launcher left a crater in the wall of the hall leading to the computerized tomography room (Fig. 3). The third CT room and all the instruments were destroyed after a rocket from a multiple rocket launcher had hit the roof.

Psychiatry: A shell fell on the roof, tore to pieces the patient room, the psychotherapy room and the hall, and caused a fire (Fig. 4).

Gynecology: A rocket from a multiple rocket launcher hit the south side of the building (Fig. 5). The surgery rooms and the waiting room in front of the outpatient clinic were destroyed (Fig. 6). The rocket also hit the western side of the building. The roof truss was also badly damaged.

Internal Diseases: A shell hit the roof truss. One shell exploded between the Administration Building and the Internal Medicine Ward causing grave damage to the central laboratory. From the north, several shots fired from light weapons hit and broke the windows.

Hemodialysis: The western part of the building was damaged.

Center for Thyroid Diseases: Walls and windows were scarred by bullets from light weapons.

Surgery: The southern side of the new building of the Surgery Ward across the garrison was shelled twice (Fig. 7). The old building of the Surgery Ward across the garrison was damaged by a shell which hit the second floor (Fig. 8). The roof was also hit and several patient rooms were damaged (Fig. 9).

Maxillofacial Surgery: Almost all windows were broken.

Administration Building: A shell hit the roof truss from across the garrison. Shots from sniping rifles hit the office rooms and damaged them.

Informatics and Library: Walls and windows were damaged by bullets from light weapons.

Restaurant and Kitchen: The building was hit by three rockets from a multiple rocket launcher that pierced through two walls (Fig. 10). Mortar shells have left holes in the ceiling. The canteen, the office and the toilet were completely destroyed.

Technical Services Department: Shots from light weapons damaged the garage and technical service rooms; an ambulance was completely bullet-scarred. A shell left a crater on the side-walk.

A rough estimate of the total damage is around 20 million DEM.



Figure 8. Facade of the old building of the Surgery Ward across the garrison.



Figure 9. A patient room in the old building of the Surgery Ward.

At the time this report was made, the Osijek General Hospital had 495 patients, 297 physicians and 2306 other employees. The patients, the sick and the wounded, spend most of the time in hospital basements, warm corridors and shelters (Figs. 11 and 12).

Nowadays, the garrison across the Hospital is in hands of the Croatian Army, so it does not pose an immediate threat to the Hospital anymore. However, the war continues and Osijek remains under heavy attacks from guns, mortars, multiple rocket launchers, etc. Therefore, unfortunately but very probably, this description of the damage suffered by the Osijek General Hospital will have to be supplemented by new data.

Discussion

Every war is a tragedy and a failure of common sense and humaneness. A number of international efforts starting with the Geneva Convention (5) have at least been aimed at alleviating the human tragedy caused by war, if it cannot be prevented. An important place in these efforts is given to declarations whose purpose is to protect civilian population. However, since the times of Jean Henry Dunant, whose efforts resulted in the establishment of the International Red Cross Organization in 1864, most attention has been paid to medical care of the wounded or sick in war con-

ditions and to ensuring free work of medical teams and institutions who are all bound by the Hippocratic oath to provide medical assistance to all who need it, regardless of the side they are on in the war.

The Osijek General Hospital is situated across the (now ex-) *Milan Stanivuković* Garrison which at the time of the attack was under the command of colonel Boro Ivanović. The distance is mere 50 m. Owing to its large size and clear signposts, the purpose of the Hospital building was well known to all the military staff in the nearby garrison. Moreover, many of the staff members were born and treated at this very institution. Up to September 27, 1991, a total of 1343 wounded were admitted to the Hospital: 470 civilians and 15 members of the Federal Army.

From a purely military point of view, one can perhaps say that the hospital building represented a certain barrier which made it difficult to aim at other military (certainly not St. Peter and Paul's Cathedral or Hotel Osijek, which accommodated foreign reporters, etc., that were also heavily damaged) targets in the city. In this sense, the Hospital was a target which was really not difficult to miss, but which also was, had there been any will to do so, not difficult to spare using well aimed missiles. The very fact that the Osijek General Hospital was hit 94 times with various weapons of great destruc-



Figure 10. Canteen damaged by a rocket from a multiple rocket launcher.



Figure 11. The wounded placed in underground "warm corridors" under the construction.

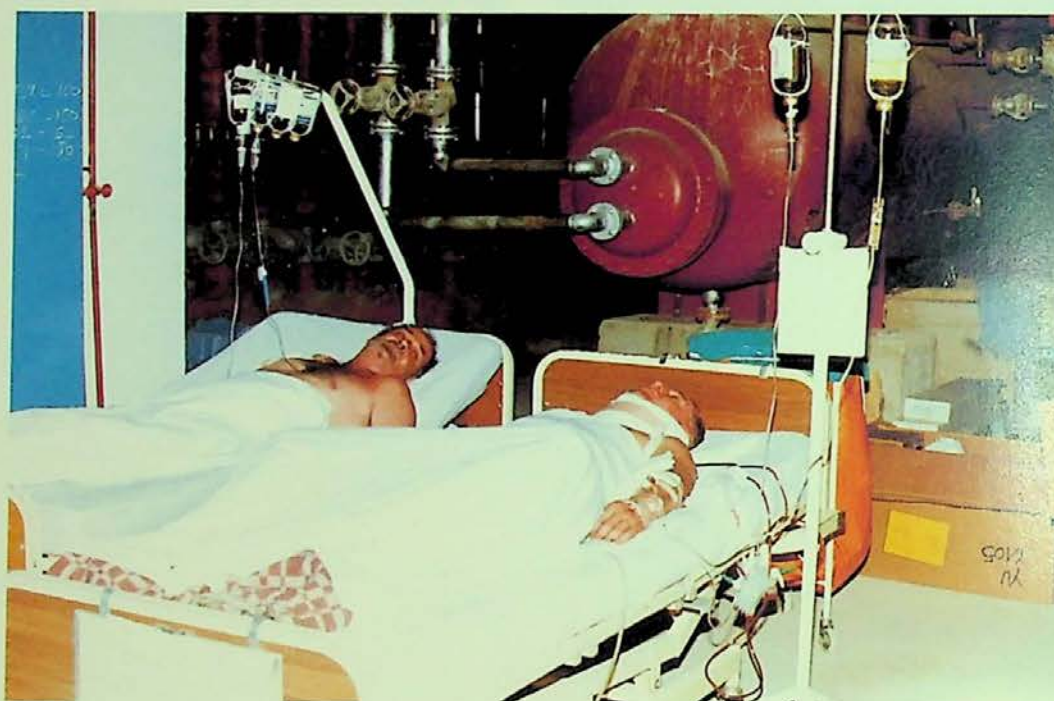


Figure 12. Intensive Care Unit placed in the Hospital central heating room of the new surgery building.

tive power, excludes any possibility that its destruction was caused by an accident, a chance error or a stray bullet or shell. The facts presented cannot be accounted for in any other way but as a result of an act of deliberate destruction of this medical institution by the so-called Yugoslav National Army.

Yugoslavia takes part in the activities of the International Red Cross Organization and is a party to a number of international humanitarian conventions. None of the states emerging from the disintegrating Yugoslavia nor the Federal Army has publicly refuted this humanitarian legal inheritance of Yugoslavia. The Red Cross Organization is active in all the Yugoslav member states and even ambulance cars of the Federal Army are marked with a red cross sign.

The Red Cross conventions are quite clear, e.g.:

Article I, 19. of the Geneva Convention clearly states: "Military or civilian medical units are protected by the Conventions and the Protocol." (5)

Article I, 21. of the Geneva Convention contains the following obligation: "Protection may only cease, however, after warning has been given, setting a reasonable time limit..." (5)

The International Red Cross Committee in Rules for the Behaviour in Combat clearly demands that the staff and the objects with the Red Cross or Red Half-moon signs be respected (6). Causing deliberate systematic and lasting damage

to the Osijek General Hospital, the Yugoslav Federal Army, which is still internationally recognized as a regular army of the state of Yugoslavia, has in many ways intentionally violated a number of humanitarian provisions of the international law of war. It is possible, though, that the soldiers and officers of the Yugoslav Federal Army are not familiar with the international conventions and humanitarian rules of the conduct of war. The fact is that, for instance, the so-called *Sanitetska oficirska škola* (Military Medical School) in Belgrade offers no courses dealing with international conventions, medical ethics or international laws of war (7). In that respect, the Manual of Military Medicine for General Practitioners, published by the Medical Staff and the Ministry of Health of the Republic of Croatia, is much more complete (8). It is thus possible that other officers of this Army were not familiar with the details of international rules of war either. Nevertheless, we think that, at the end of the 20th century, the humanitarian role and sanctity of hospitals, Red Cross signs and the like, are so deeply rooted in the everyday culture of every man that no special education is really essential.

Conclusion

In war conditions, it is probably impossible to prevent that some bullet or other destructive weapon now and again accidentally hits medical staff or medical institutions. In the tragic war conditions, this risk must be accepted by all medical

staff. However, the documentation presented in this paper clearly shows that during the period from September 14 to September 17, 1991, the General Hospital in Osijek, the central medical institution in the regions of Slavonia and Baranya, an educational base of the Zagreb University School of Medicine, was not an accidental victim of the war against Croatia, but an intentional target systematically destroyed by all kinds of destructive weapons by the Army which is fighting against the legitimate will of the Croatian people to have their own state in their own homeland.

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CMC (Croatian Medical Corps) External Fixator Intended for War Surgery

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Abstract. A new type of external fixator intended for war surgery, named CMC (Croatian Medical Corps) fixator, is described. The fixator was manufactured at *Instrumentarija*, Zagreb, according to an original design based on the knowledge and results acquired from previous relevant scientific projects. According to its biomechanical properties, the fixator belongs to the group of unilateral or connective external fixators, and is intended for the fixation of long bone fractures in war surgery and in natural disasters. It can be used for two purposes: immobilization during transportation to the institution where the problem will be definitely resolved and external immobilization until the completion of secondary healing of the bone. The fixator consists of only three elements and an universal wrench, and is very simple to use. The application of the apparatus is described in detail. The fixator is made of a high-quality non-corroding material, intended for multiple usage. The price of the device is considerably lower than that of any similar external fixators manufactured abroad. Initial field-work experience yielded satisfactory results.

Key words: bone, external fixator, fracture, war

Introduction

In the last few decades, external fixators have become an indispensable constituent part of medical corps equipment in all developed countries. Usefulness of external fixators was demonstrated in the Israeli-Arab War, in the Vietnam War and in all subsequent wars (1). Early treatment of long bone fractures, primarily open but also closed ones, by use of external fixators in the first battle arrays, has been shown to markedly reduce the number of various complications. This primarily applies to infections, and to soft tissue, blood vessel and nerve lesions. Pain is eliminated or at least alleviated by immobilization of bone fragments, thus considerably contributing to the prevention of the occurrence and development of shock (2-4). Special simple external fixators intended for the

specific conditions of war surgery and natural disasters, very simple to use, so that can be applied by a minimally trained person, but still retaining all the main properties of external fixator, have been constructed.

Quite frequently, these are disposable devices used exclusively for primary immobilization during transportation to the institution where definite treatment and care will be performed, or as constructions belonging to a highly sophisticated external fixation system, allowing additional attachments to be fixed upon the fixator already applied or individual parts exchanged.

In the defensive war led by Croatia against Serbian terrorists and the Federal Army, the need of external fixators has been readily recognized because of severe injuries and wounds caused by

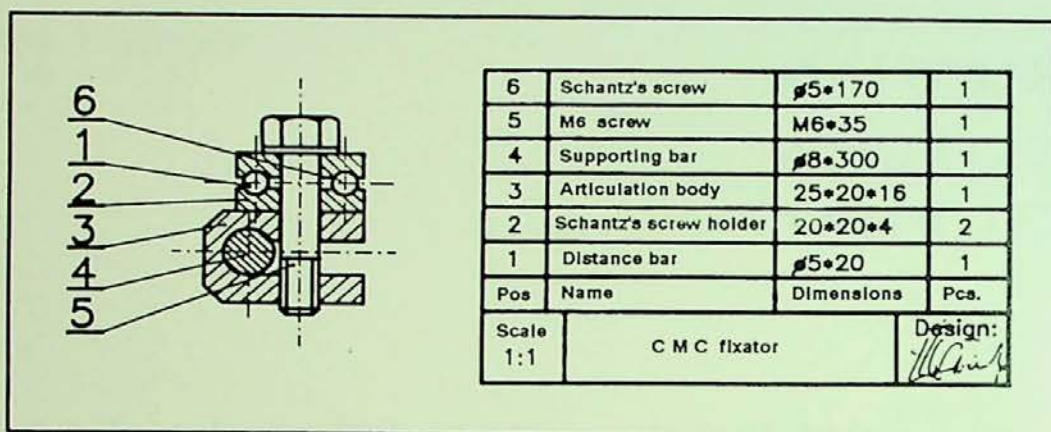


Figure 1. CMC fixator design.

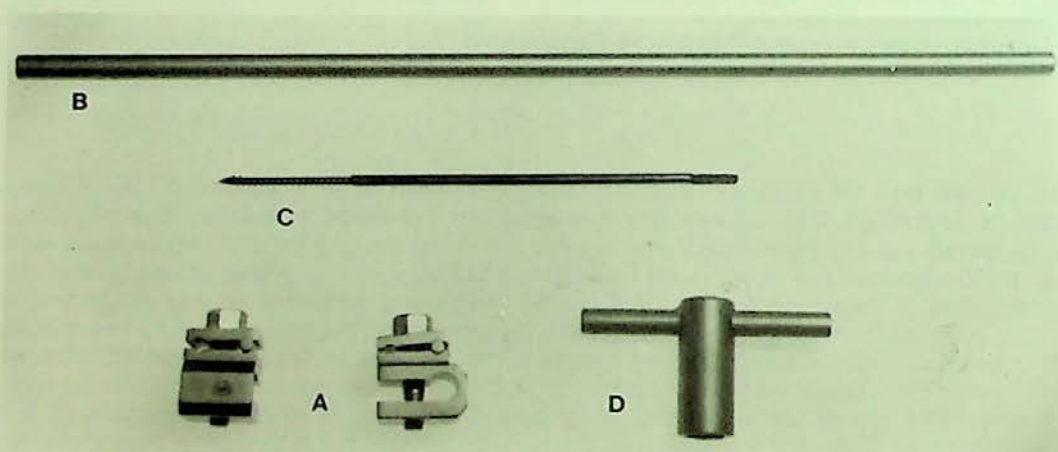


Figure 2. Constituent parts of the CMC fixator: A, bone spike; B, supporting bar; C, Schanz's screw; D, universal wrench.

highly destructive projectiles and bomb-shell shrapnel. Initially, the needs had been covered from the stock at the orthopedic and traumatologic hospitals, but soon it was found inadequate. Thereafter, the requirements have partly been met by donations arriving daily from the Croatian diaspora from all over the world, and also from many institutions, hospitals, charity organizations, etc. Thus, there was a variety of fixators, with or without corresponding instruments, which was a problem even for surgeons skilful in the application of fixators.

These reasons, along with the fact that the number of fixators available is still insufficient, have urged us to construct an own model of external fixator, based on the advances and results acquired from previous scientific projects, intended

for the treatment on the spot of the Croatian National Guard and Police forces (5-8).

Construction of the CMC Fixator

A prototype of the CMC (Croatian Medical Corps) fixator was manufactured in collaboration with *Instrumentarija*, Zagreb (Fig. 1). The fixator is made from a high-quality PROKROM 11 alloy. According to its biomechanical characteristics, it is a unilateral or connective external fixator. Thus, like any other unilateral or connective external fixator, it does not ensure the degree of stability, not even with ideal reposition, required for primary healing of the bone (5). Therefore, this fixator can be used for two functions: to immobilize the bones during transportation to the institution where the problem will be definitely resolved and

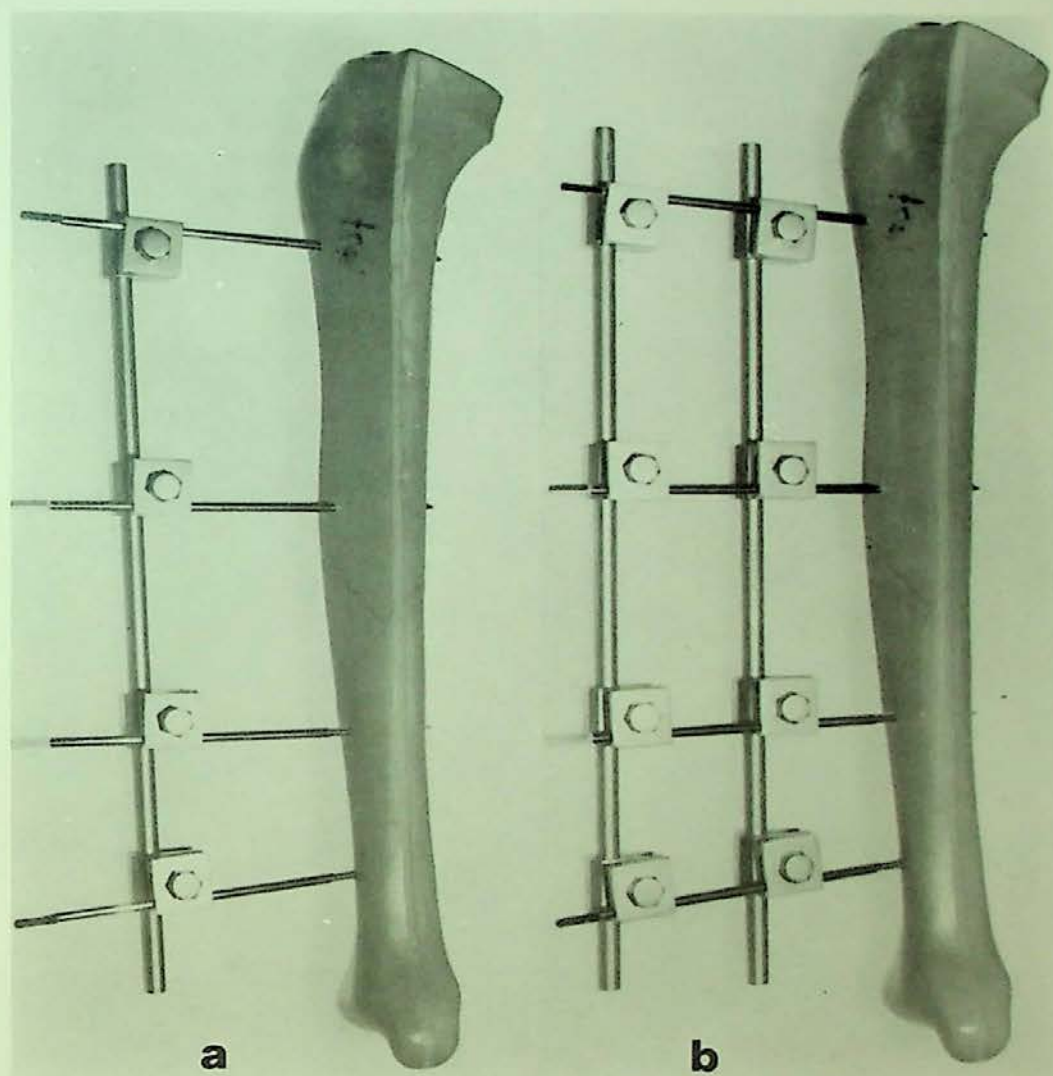


Figure 3. CMC fixator: a, a single bar construction; b, a two-bar construction.

to provide conditions for secondary healing of the bone.

Initial studies showed satisfactory results, thus we decided to test the first ten sets in the critical areas of Croatia. We tested them ourselves on the spot as well. On the basis of this direct experience, some alterations and improvements were made, and we believe the fixator will now meet the requirements. The apparatus consists of three basic elements, i.e. a bone spike, a supporting bar and a Schanz's screw, and a universal wrench (Fig. 2).

Bone Spike

The construction of the bone spike allows rotation in two planes. It is fixed by an M6-hexagonal head screw. The Schanz's screw and supporting bar are tightened by screwing up the M6 hexagonal head screw with a universal wrench, thus defini-

nately fixing the entire construction consisting of bone fragments and fixator elements.

Supporting Bar

The bar is made of the same material as the bone spikes. Its main function is to ensure stability of the repositioned bone fragments and to take a part of pressure capacity in case of lower extremities. When applied in wounded subjects, one or two bars placed in parallel can be used, as required (Fig. 3).

Schanz's Screw

The size of the screw is 0.5 x 17 cm, with a lancet tip followed by a self-threading thread.

Universal wrench

It is of a very simple construction, serving for tightening the Schanz's screws up and for fixing the supporting bars (Fig. 2d).

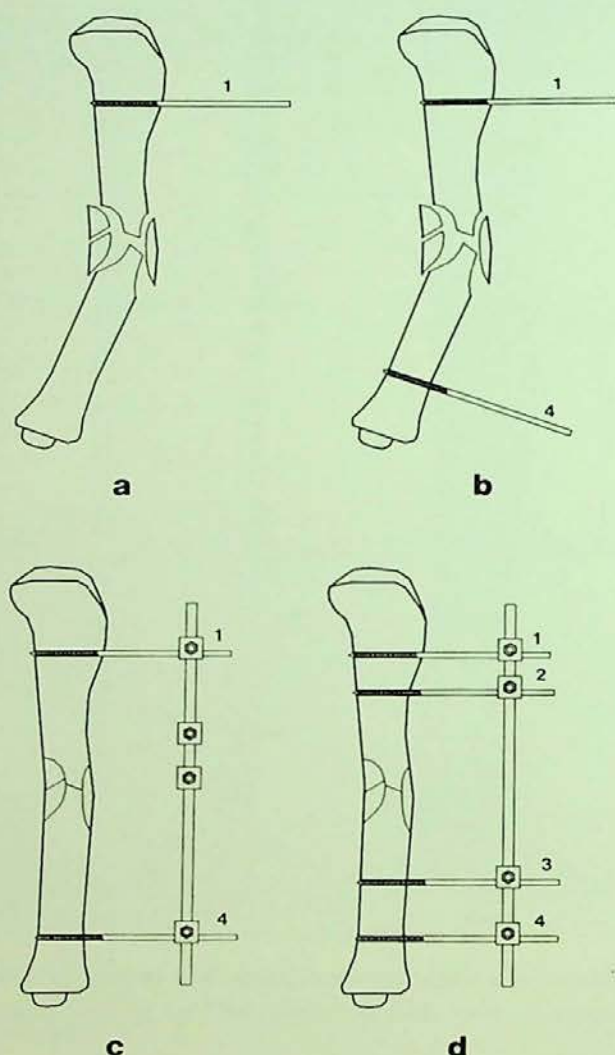


Figure 4. Use of the CMC fixator: a, application of Schanz's screw 1; b, application of Schanz's screw 4; c, repositioning, bone spike tightening and fixator fastening; d, application of Schanz's screws 2 and 3.

Indications and Application of the CMC Fixator

The CMC fixator is first of all intended for primary immobilization of long bone fragments, preferably within the shortest possible time after injuring and in the first battlefield shelter. Owing to its simplicity, it can be applied by even a minimally trained person. Its use is indicated in both open and closed long bone fractures. The procedure of the fixator application consists of the following steps:

1. Under local anesthesia, incision is made through soft tissues to the bone;
2. Schanz's screw 1 is applied perpendicularly to the bone diaphysis, proximally and adjacently to the articulation (Fig. 4a);
3. Schanz's screw 4 is also perpendicularly and distally applied (Fig. 4b);
4. The supporting bar is slid on Schanz's screws 1 and 4, along with four bone spikes, so that spikes 1 and 4 are placed on Schanz's screws;
5. Reposition by extension and tightening of

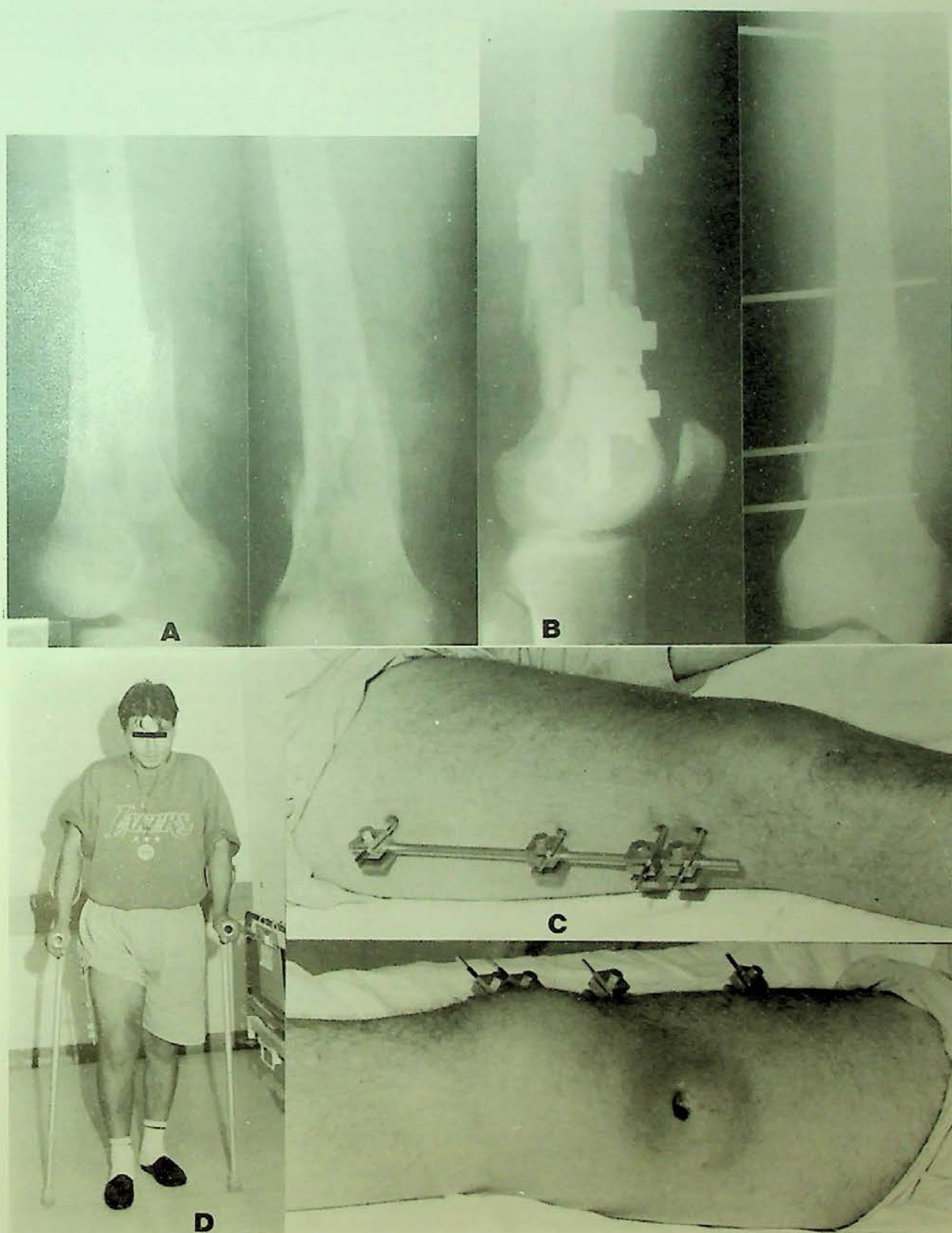


Figure 5. CMC fixator applied in a wounded subject: A, roentgenogram of the injury; B, postoperative roentgenogram; C, the fixator as applied in the patient; D, day 6 after the surgery.

spikes 1 and 4 follows. Thus, the basic fracture stability and fragment reposition are achieved. In case of unsatisfactory repositioning, the fragments can be subsequently repositioned by loosening the spike screws (Fig. 4c);

6. Schanz's screws 2 and 3 are applied adjacently to the fracture, preferably through intact skin and soft tissues (Fig. 4d). All bone spikes are refastened, and the application of the fixator is thus completed.

During the CMC fixator application, all general principles referring to external fixators should be respected (6), according to the possibilities of the specific war conditions (Fig. 5). If greater stability of the construction is required, another supporting bar with bone spikes can be fastened to Schanz's screws, taking care thereby that all the screws be in the same plane.

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Aims and scope

Croatian Medical Journal (CMJ) is conceived as an international journal open to all scientists and fields of medicine. It publishes invited Editorials, Original Articles, Clinical Reports, Laboratory Reports, invited Reviews, Medical Intelligence Articles, Special Articles, Letters to the Editor, Book Reviews and Reports of Scientific Meetings.

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