

FORENSIC ANALYSIS OF SREBRENICA POST-MORTEM REPORTS

The subject of this analysis are the results of the forensic analysis performed by expert teams of the Hague Tribunal [ICTY] between 1995 and 2002 at several locations in the region of Eastern Bosnia when they exhumed and examined hundreds of human remains presumed to belong to Srebrenica victims.

Post-mortem examinations were conducted on the remains of victims from the following mass graves: Glogova, Kozluk, Konjevic Polje, Hodzici road, Nova Kasaba, Pilica, Ravnice, Zeleni Jadar, Lazete, Cerska, Liplje , Dam i Cancari road.

At the very start, it would be useful to state the following. Asked by the defense in the *Popovic et al.* case whether it would be relevant to try to determine how many Moslems perished as a result of combat activity, prosecution military expert Richard Butler, replied: “It would be relevant if the forensic evidence of mass graves were showing evidence that would reflect that the bodies in those graves reflected combat casualties. The forensic evidence, as I understand it, coming out of those mass graves reflects the opposite, that they are not combat casualties.” [Popovic et al., Transcript, January 23, 2008, page 20250] Nevertheless, a little further on in the cross examination by the defense, Butler admitted that it would be a reasonable assumption that “between 1000 and 2000” Moslems could have died as a result of combat activity [Transcript, p. 20251, January 23, 2008, lines 6-8]. A careful analysis of the forensic material that had been prepared by experts of the same Office of the Prosecutor where Butler worked indicates that—contrary to Butler’s claim—a significant number of casualties did indeed have its origin in combat activity and therefore does not fit into the execution scenario.

Impact of firearms

Since this analysis deals with victims who died mainly as a result of injuries inflicted by firearms or projectiles of different kinds, our report contains a discussion of the impact of firearms and other kinds of ordinance on the human body. It should also be noted that other than information about the entry and exit wounds, and the kind of projectile involved, the available reports that were used in this analysis give us little additional data.

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Material used for the purposes of this analysis

A total of 3568 cases were analysed. They represent the sum total of material gathered by the prosecution of the Hague Tribunal at 13 different locations between 1995 and 2002.

Each of these localities is discussed separately, following which the pertinent data are presented in the form of a graph which provides a clearer insight into the results.

In order to make the results easily understandable, they were divided into 9 classes of casualties:

First: bodies with a bullet in both the upper and the lower region.

Second: bodies with a bullet only in the upper region.

Third: bodies with a bullet only in the lower region.

Fourth: bodies which in addition to bullet traces contain also traces of various kinds of metal fragments.

Fifth: bodies which contain only metal fragments of various kinds.

Sixth: various body parts, i. e. cases where what was exhumed was not a body but only a few bones, in some instances just one bone.

Seventh: incomplete bodies, i. e. reports which describe only the upper or lower region of the body, or only the cranium.

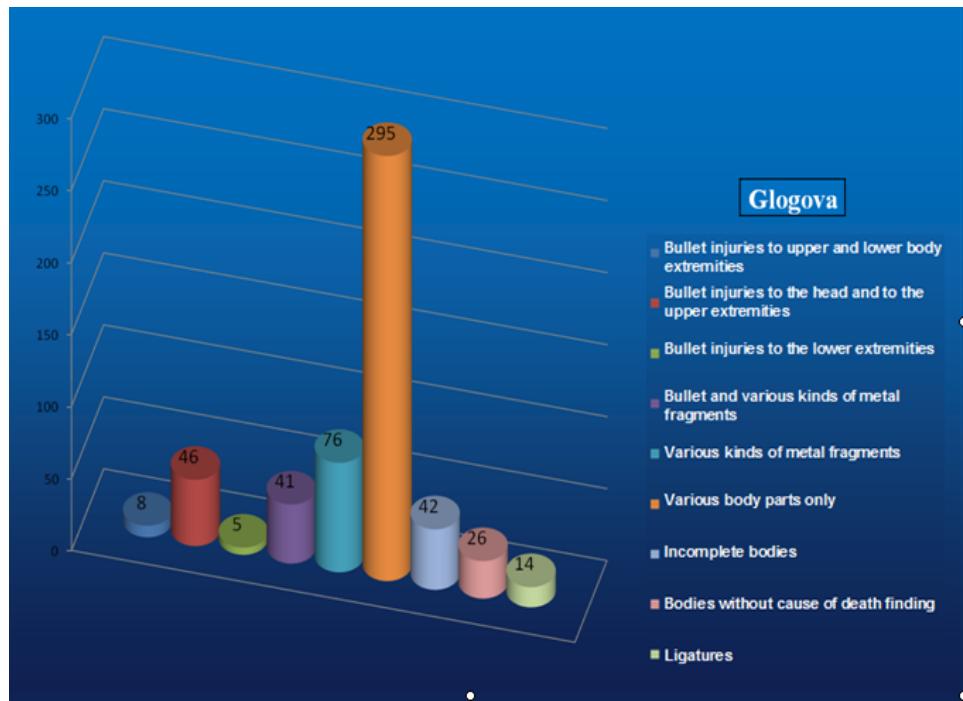
Eighth: bodies without a finding as to the cause of death.

Ninth: bodies with blindfolds and/or ligatures.

Glogova

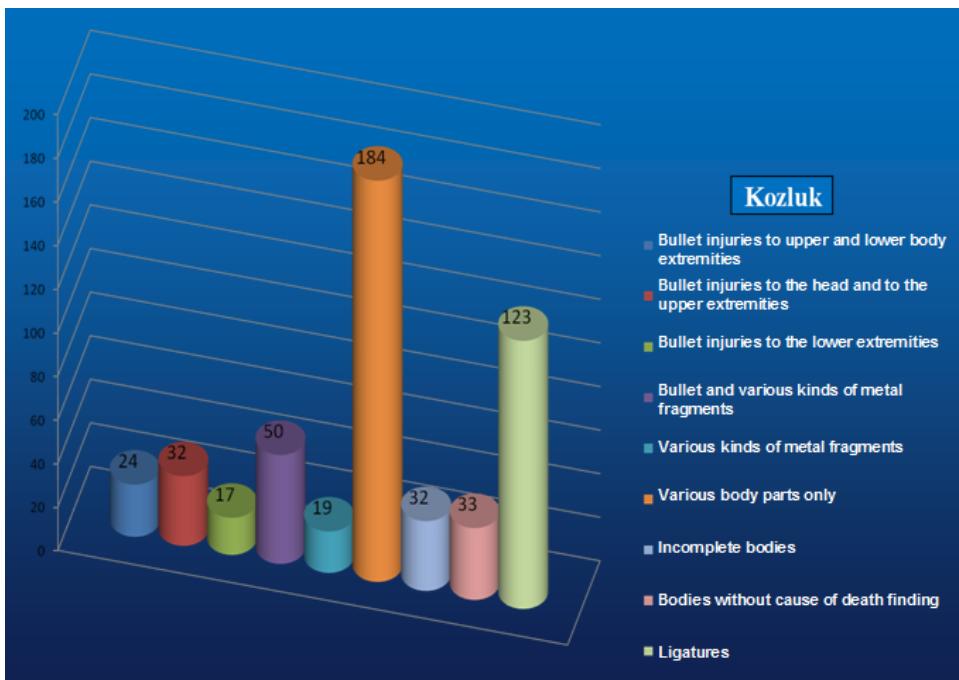
As the graph shows, the column representing body parts plays the dominant role. In a great number of cases, 5 or fewer bones are involved. Assuming that a human body is composed of over 200 bones, it is clear that such a small quantity is insufficient for drawing any forensically significant conclusions, especially in the case of cranial or some other bones which do not shield vital organs, or if the bones themselves do not exhibit injuries caused by bullets or other weapons. It is important to note that, out of 295 cases at this location where only a body part was found, prosecution experts were themselves

unable to determine the cause of death in 280 cases. Thirty- five bodies show shrapnel traces, which indicated unambiguously that these persons died from the impact of a grenade, mortar, or some other heavy weapon. Blast wounds were the cause of death in 32 cases. It is also relevant to bear in mind that 53,3 % of the Glogova material does not consist of complete bodies, but only of body parts or fragments. Out of that percentage, in 95% of the cases the cause of death was not determined. When referring to incomplete bodies, in 33 cases the cause of death was not determined, in 8 cases the cause of death was injury to the upper body region, and in one cases lower body region injuries were cited as the cause of death.



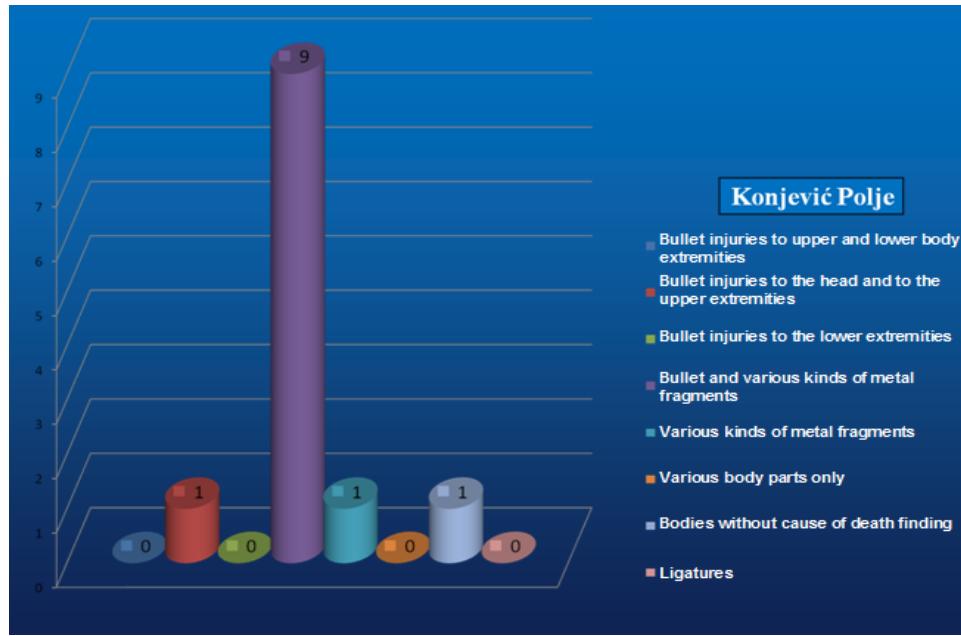
Kozluk

By far the majority of the cases here consist only of body parts, i. e. a total of 184 reports. Out of this number, in 176 cases the cause of death was not determined, which comprises more than 95,7 %. Here as well, it is important to mention 123 bodies that were found with ligatures and/or blindfolds, which suggests that they were executed. Out of 32 incomplete bodies, in 26 cases the cause of death was not determined.



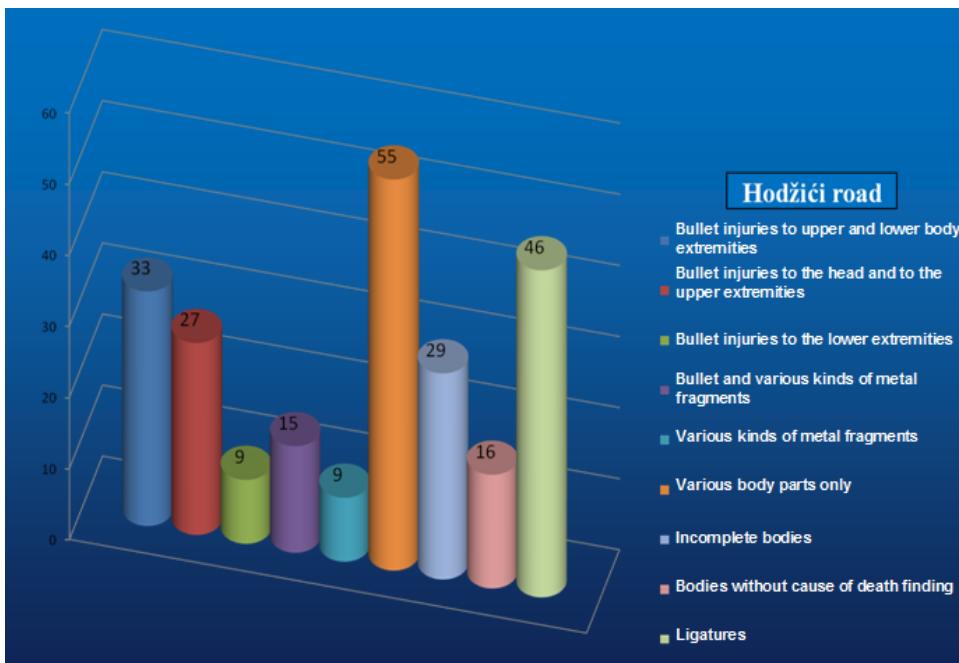
Konjevic Polje

In the Konjevic Polje mass grave, 12 bodies were found. Most of them sustained bullet injuries or from metal fragments of various kinds. It is highly likely, based on the nature and pattern of injuries, that bodies exhumed in this mass grave perished during combat operations.



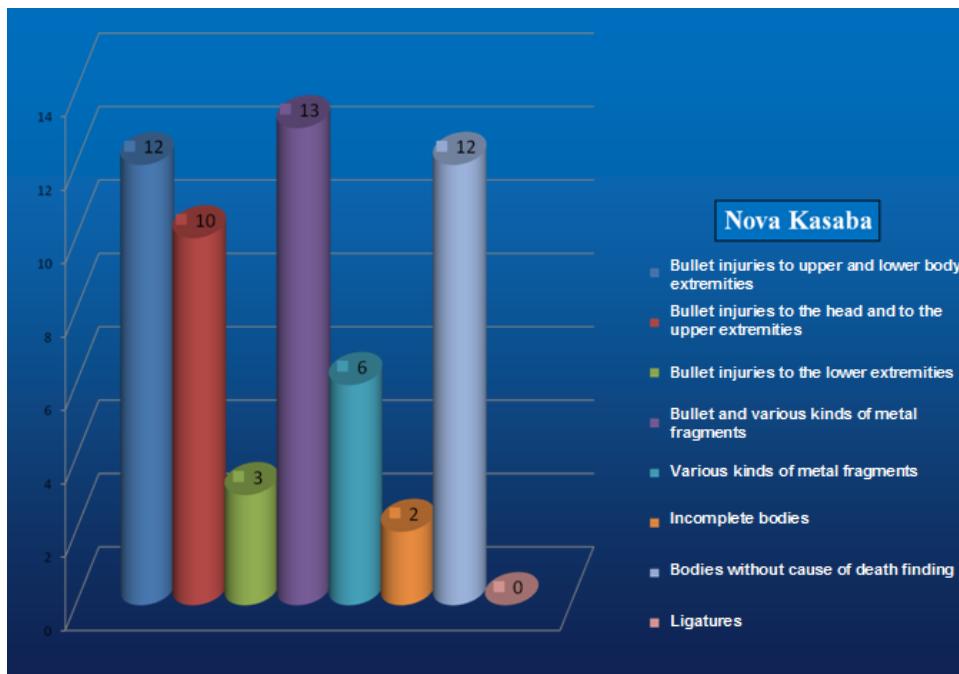
Hodzici road

As in the previous mass graves, cases consisting only of body parts predominate, totaling 55. The cause of death was not determined in 52 of those 55 cases, which in percentage terms comes to 94,5 %. The number of bodies with blindfolds and/or ligatures is 46. Of 29 incomplete bodies, the cause of death was not determined in 13, while in 7 cases the cause of death were injuries to the upper region of the body and in 9 cases the cause of death was injury to the lower extremities.



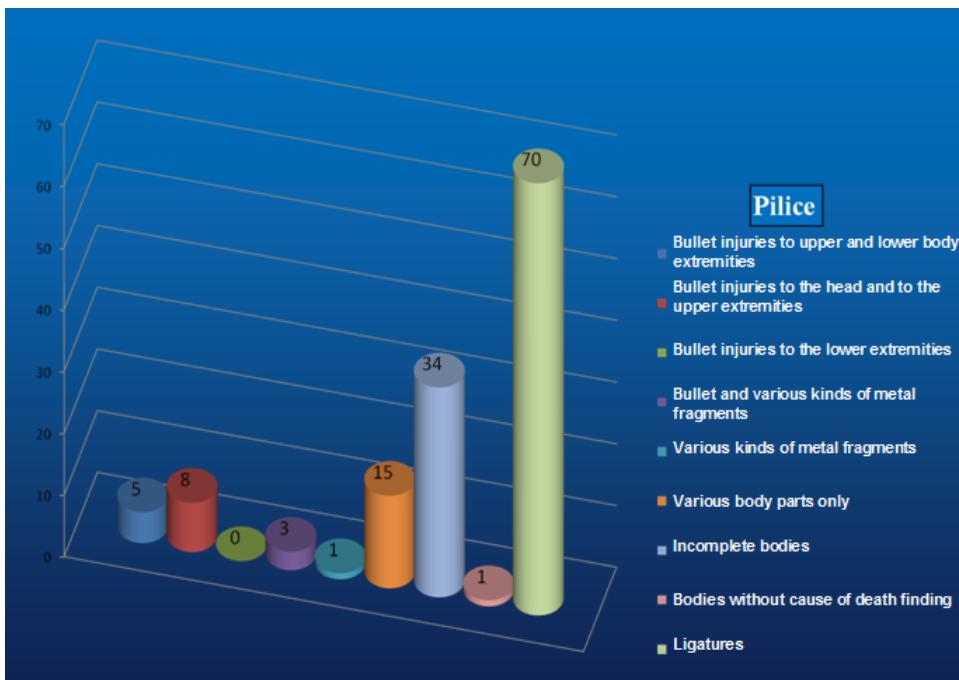
Nova Kasaba

With respect to the distribution of injuries, the human remains in Nova Kasaba exhibit a somewhat different picture. Here, the number of injuries caused by bullets and those that were caused by metal fragments of various kinds are about even. Also notable is the number of whole bodies without any injuries or tissue damage, as a result of which no cause of death was determined. Cause of death also was not determined for incomplete bodies. There were no bodies with ligatures or blindfolds in this mass grave.



Pilica

Pilica—Branjevo farm is notable for the number of bodies with blindfolds and/or ligatures. They are 70, or 51% of the total number of cases here. The rest are mainly body parts or incomplete bodies. With regard to incomplete bodies from this mass grave, it may be noted from the graph that alongside some of the incomplete bodies in addition to a bullet various metal fragments were found as well, while another portion had only bullet related injuries, and the rest did not exhibit any injuries at all so that no cause of death could be determined. In 15 cases where only an inconsiderable portion of the body was located, cause of death could not be determined in 12.



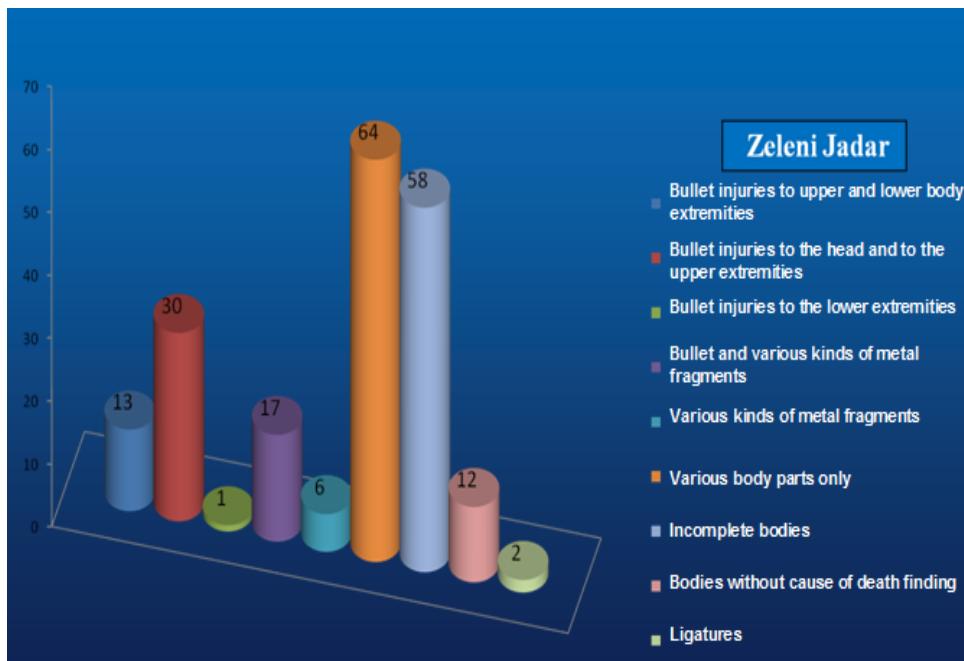
Ravnice

What characterises this mass grave is the high number of cases where only body parts were located. Out of a total of 495 autopsy reports, 275 refer to cases involving only a body part. That proportion can be clearly seen in the graph but for the data to be even clearer, it is noted that in 55 % of the cases only a body part, often just one or more bones, were located. Perhaps even more significantly, out of 275 reports which involve only a few bones, in 259, or 94,2 %, the cause of death was not determined. With incomplete bodies, the cause of death was not determined in 17 cases.



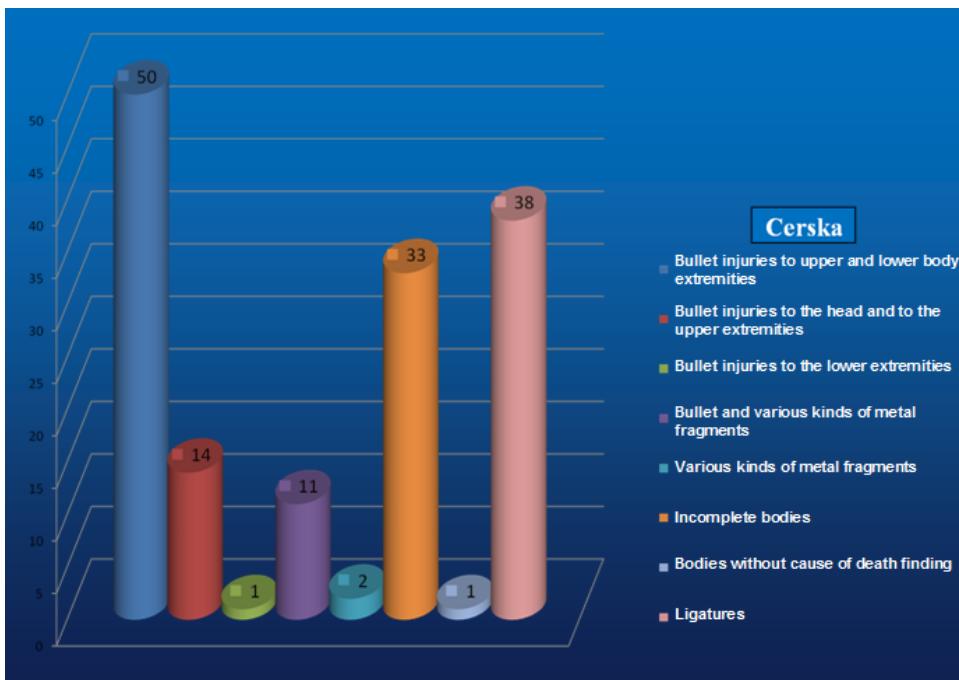
Zeleni Jadar

Zeleni Jadar mass graves also have a significant number of reports with very few bones. The percentage of cases where only a body part was found, e. g. a thigh or a foot, is 31,5 %. Out of a total of 64 reports where only a body part was located, in 54 cases, or 84,3 %, the cause of death was not determined. Where incomplete bodies are involved, of 58 such cases the cause of death was not determined in 28 cases, while the remaining incomplete bodies show bullet injuries in upper and lower extremities, 18 and 11, respectively. That means that the cause of death in 18 incomplete body cases was firearm injury to the upper, and in 11 cases to the lower extremities.



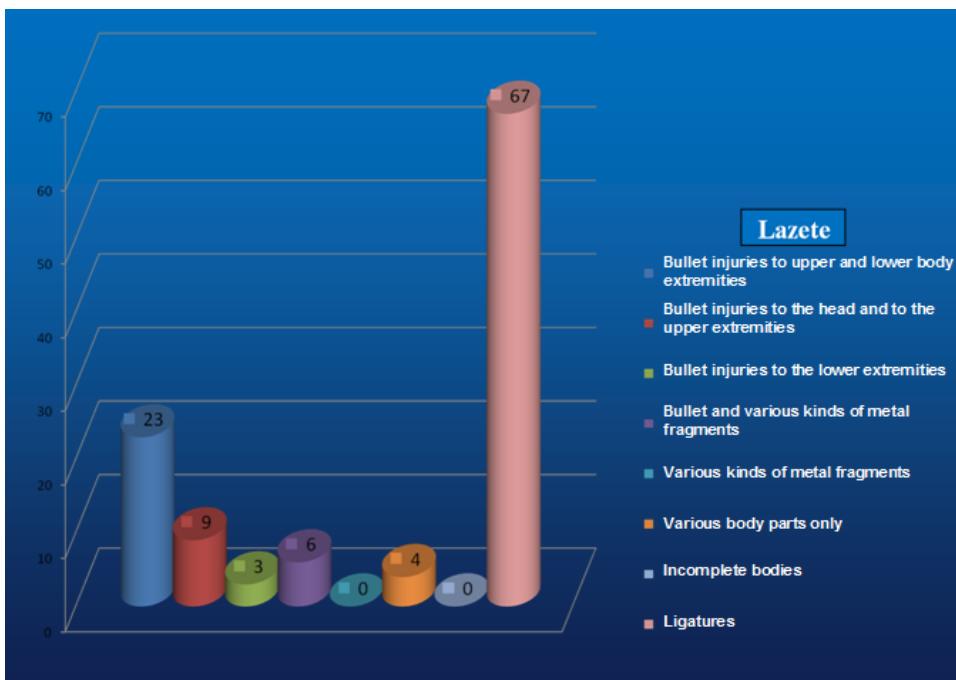
Cerska

Mass graves from this locality are characterized by the presence of bullets with a wide ranging distribution. In a great number of cases, bullets were found in both the upper and the lower extremities. Even in cases where the body was not complete, it was possible to determine the cause of death by noting a bullet or bullet fragments among the remains. There is a total of 33 such reports where the cause of death are injuries caused by firearms to both upper and lower extremities. Here we must also mention 38 bodies where blindfolds and/or ligatures were found, which indicates execution.



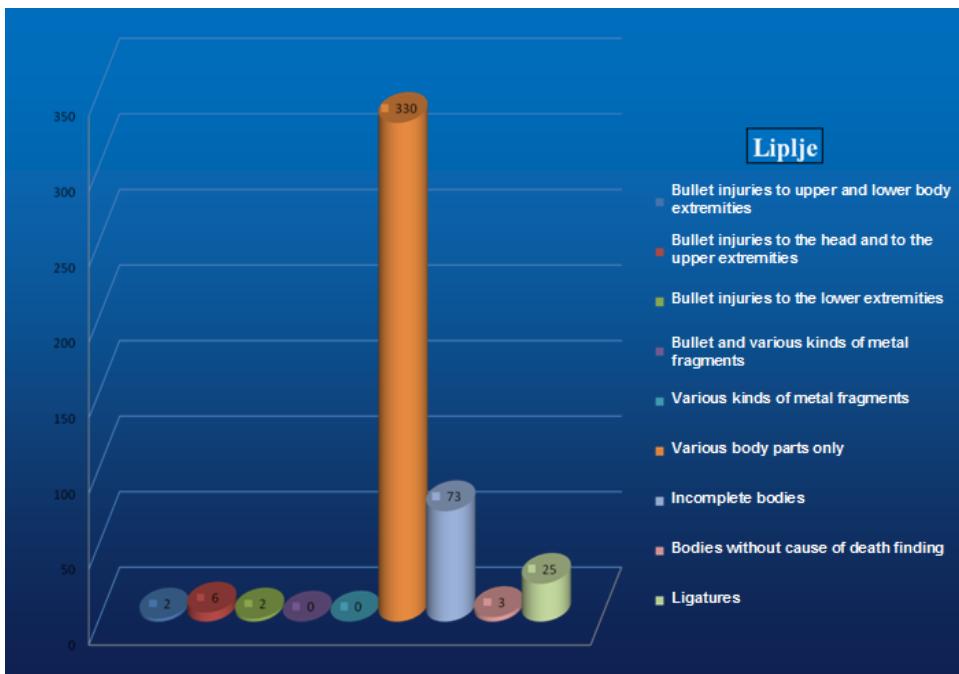
Lazete

As reflected in the graphs, this mass grave is characterized by a high percentage of bodies with blindfolds and/or ligatures. There are 67 such bodies, or 59,8 % of the total. The remaining bodies contain mainly bullet injuries to the upper or lower extremities.



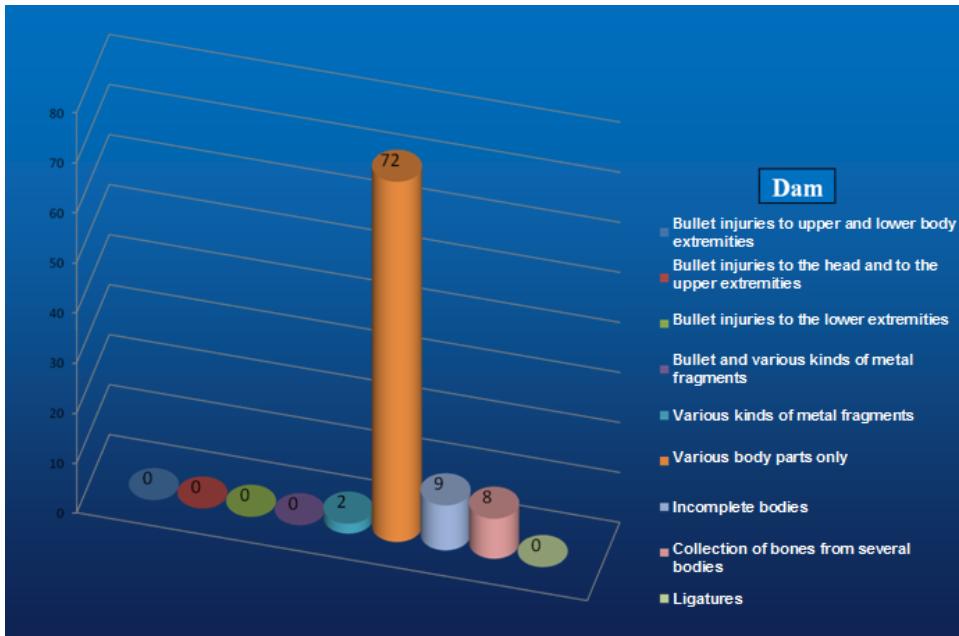
Liplje

The Liplje mass graves are distinguished by the number of reports where only a body part was found. Out of a total of 441 reports, 330, or 74,8 %, refer to body parts, while in 73 cases, or 17,5%, the body is incomplete. Of the 330 cases which involve only body parts, in 318, or 96,4 %, the cause of death was not determined. With regard to incomplete bodies, out of 73 such reports the cause of death was not determined in 53 cases. The remaining 20 reports show an even distribution of injuries inflicted by firearms to the upper and lower extremities, respectively, causing death in all these cases.



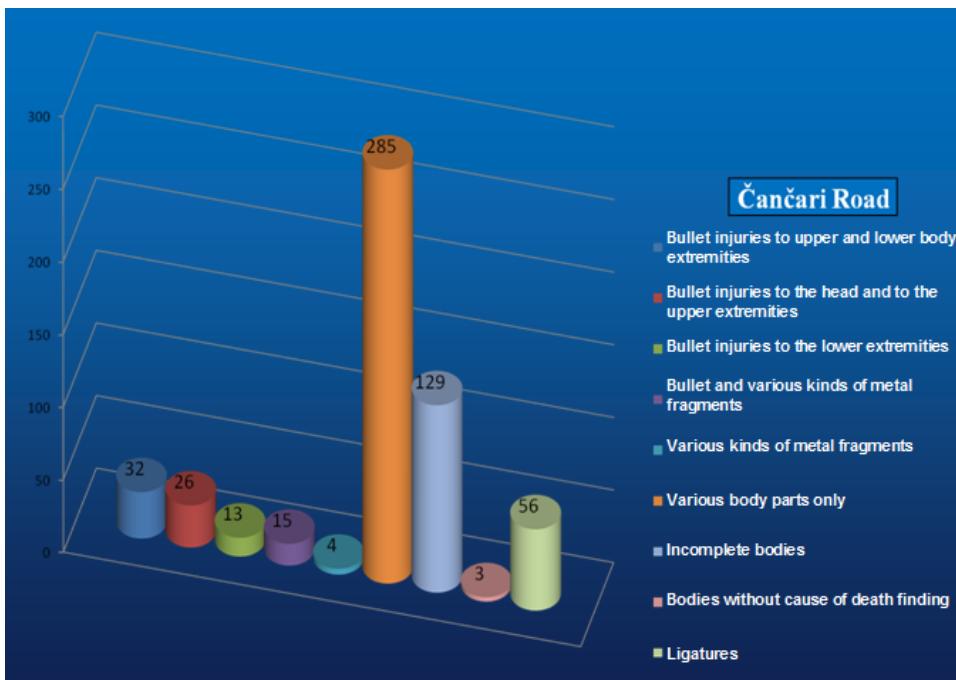
Dam [Brana]

Mass graves in the vicinity of the Dam share the characteristics of some of the previously discussed locations in that the majority of the cases consist of just a few bones or a small body part. There are 72 such reports. In those reports, no cause of death is determined. In contrast to previous sites, we find here a new category of reports based on collections of 50 or more bones and bone fragments, without any attempt at classification, or apparent support for valid evidentiary conclusions. These bones belonged to a variety of persons.



Čančari road

The Cancari Road mass graves also contain a high percentage of reports where only a few bones were found. There are 285 such reports, out of a total of 563, or 50,6 %. The cause of death was not determined in 240 cases, or 84,2 % of the reports. There is also a high percentage of reports with incomplete bodies, totaling 129. Out of these 129, in 77 cases the cause of death was not determined, or 60% of the total. The remaining reports, where the cause of death was determined, contain a high percentage of injuries inflicted by firearms. There were also 56 reports with blindfolds and/or ligatures, or about 10% of the Cancari Road total.



Data summary

There is a total of 3568 autopsy reports in the material that was reviewed. It must be pointed out that these are 3568 reports, not bodies. The reason is clear: 1 report does not equal 1 body. In almost 44,4 % of the reports only a body part, often just a bone, is involved. Considering that a human body consists of over 200 bones, it is obvious why an autopsy report here is not the equivalent of a body. The corollary of the above is that the number of bodies is far less than the number of reports, a fact which is supported by the analysis of mass burial sites and of the graphs which accompany each of them. To make the results as analytically accessible as possible, they were divided into five groups.

The first group consists of bodies and body parts where blindfolds and/or ligatures were found, bodies with a bullet in the upper or in the lower extremity, and bodies where a bullet was located only in the upper extremity. about which it may be asserted with confidence that these persons were executed.

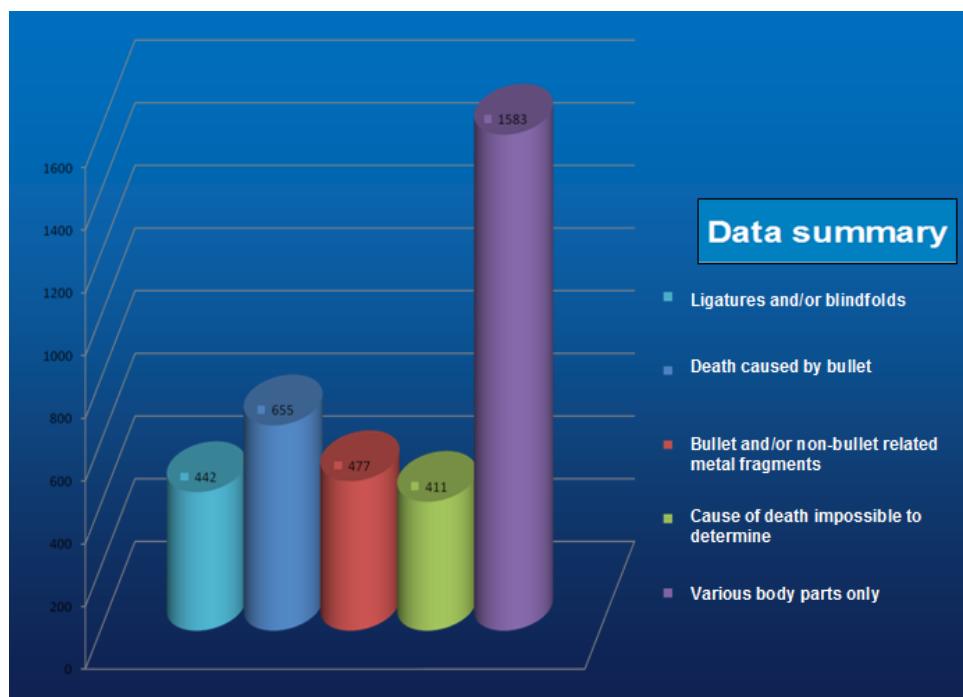
The second group includes bodies where only a bullet or bullet fragments were found. Such injuries could have been inflicted either during combat or as a result of execution.

The third group consists of bodies which did not have just bullet injuries, but also metal fragments of projectiles other than bullets and bodies with only different metal fragments. The injuries sustained by this group are most consistent with combat activity.

The fourth group consists of incomplete bodies where no cause of death could be determined.

The fifth, and largest group, consists of reports where only a few body parts were found, often just a single bone, or a foot encased in a boot, a thigh, or the like. That is 1583 reports out of a total of 3568, or 44,4 %. This figure gains in significance when it is considered that in these reports, where only a body part was found, in 92,4% of the cases no determination of the cause of death was made.

The Table which follows summarizes all the major findings:



Based on the post-mortem reports that were reviewed and a classification of the data they contain, the following professionally responsible conclusions may be drawn about the manner and causes of death of these victims:

1. The first group consists of 442 bodies on or about which blindfolds and/or ligatures were found, which indicates that those persons were executed.

2. There are 655 bodies which show bullet inflicted injuries and based only upon that finding it is impossible to conclude whether they might have been executed or were killed during combat activity or committed suicide.
3. In relation to a certain number of victims [477] it would be reasonable to conclude that they were not executed because of the presence of shrapnel and other metal fragments which are not bullet related. That pattern of injury is consistent with combat activity, not with execution, as the cause of death.
4. For 411 bodies it was impossible to determine whether or not death was caused by execution because those bodies were incomplete. In this group we also find bodies which did not exhibit any traces of projectiles of any kind, and for that reason also the cause of death could not be determined.
5. A significant percentage of the reports, 44,4 %, or a total of 1583, consists of only a few bones. If we take into account that a body consists of more than 200 bones, then it is clear that the reports in this category were useless for drawing conclusions of any kind. That is also suggested by the fact that in 92,4% of the reports in this category, even prosecution forensic experts refrained from making a determination of the cause of death.

This analysis also includes a discussion of a certain number of individual forensic reports which are not compatible with generally accepted professional standards and which often do not support the conclusions that are drawn by prosecution forensic experts based on the data they contain.

Control analysis

Regardless of the fact that these results are very clear, we thought that it would be in the general interest to conduct a parallel, or control, analysis because the previous procedure did not give as a definitive answer about the total number of victims. Because of the enormous number of post mortem reports which consisted of only a handful of bones, we sought another convenient way to check the results. We therefore decided to conduct an additional analysis. Our basic objective was to establish as closely as possible the total number of bodies in the mass graves. Once we have a fairly reliable total figure, we can then with some degree of confidence proceed to classify the victims as probably executed or as probably having been killed in combat.

The parameters we used were the total number of craniums and faemurs. Since in a significant number of cases the craniums were smashed or fragmented, sometimes into more than 20 individual pieces, that approach proved impractical and was abandoned. We then concentrated on counting the faemurs. In the course of our research, we counted all

the right and left faemurs, as well as faemur fragments whenever it was possible to determine whether they belonged to the right or the left faemur bone.

For a small number of fragments [a total of 28] due to their insufficient size it was not possible to determine whether they belonged to the right or to the left faemur bone.

As the attached table demonstrates, the results are entirely consistent with the preceding analysis. Both approached yield the result of less than 2000 bodies in the thirteen mass graves, or between 1919 and 1923.

We stress that this total figure of victims for all mass graves includes both categories, those who were executed and those who were killed during combat engagements. Thus, the thesis which we put forward in our main study, that the considerable number of reports [44,4%] which consist only of fragments cannot legitimately be treated as bodies, now stands fully corroborated. To repeat, the number of those reports which only refer to fragments is 1583. When we deduct that number [1583] from the total number of “cases” for which Tribunal forensic experts have opened post-mortem reports [3568], we obtain a figure of 1985 bodies in various stages of completeness. Within acceptable parameters, that coincides with the results of our control analysis with reference to faemur bones which has given us a range of between 1919 and 1923 dead persons in Srebrenica-related mass graves.

Mass grave	Right femur	Left femur	B o n e fragment
Liplje	131	131	4
Ravnice	221	224	1
Glogova	275	273	2
Čančari road	233	240	3
Kozluk	318	315	0
Hodžići road	155	156	2
Cerska	146	146	0
Nova Kasaba	56	56	0
Lažete	110	110	0

Pilica	115	115	0
Zeleni Jadar	116	113	1
Dam (Brana)	31	32	15
Konjević Polje	12	12	0
Total femur bones	1919	1923	28