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Mobile Autopsy Teams in the Investigation of War Crimes in Kosovo 1999*

REFERENCE: Sprogø-Jakobsen S, Eriksson A, Hougen HP, Knudsen PJT, Leth P, Lynnerup N. Mobile autopsy teams in the investigation of war crimes in Kosovo 1999. *J Forensic Sci* 2001;46(6):1392–1396.

ABSTRACT: On request of the International Criminal Tribunal for the former Yugoslavia (ICTY), the Danish-Swedish forensic teams worked in Kosovo during the summer and the fall of 1999. The teams worked mainly as “mobile teams” at sites with few graves. Only two larger sites were examined. Most of the bodies were buried separately. A few “multiple burial” graves were examined, but no mass graves were encountered. The main purpose of the autopsies was to establish the cause and manner of death. Identification was of less importance, but a majority of the bodies had been identified prior to the autopsy. A total of 308 bodies, mainly males, were examined. The age varied greatly with a mean age of 47 years. The most common cause of death was gun shot wounds and the most common manner of death was homicide.

KEYWORDS: forensic science, forensic pathology, exhumation, war crimes, Kosovo

As a result of the suspected violations of human rights during the conflict in Kosovo in 1999, the Chief Prosecutor for the International Criminal Tribunal for the former Yugoslavia (ICTY) requested aid in the investigations of the suspected war crimes. The following countries: Austria, Belgium, Canada, Denmark, France, Germany, Iceland, The Netherlands, Spain, Sweden, UK, and USA took part in the investigations in the summer and the fall of 1999.

The aim of this paper is to present the results of the Danish-Swedish investigations in relation to previous investigations in the former Yugoslavia, with special reference to the application of mobile autopsy team work.

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* A poster was presented at the annual AAFS meeting in Seattle, February 2001. The method of mobile teams and some preliminary results have been presented at a few Scandinavian and European professional meetings.

Received 10 Oct. 2000; and in revised form 22 Jan. 2001; accepted 25 Feb. 2001.

Materials and Methods

The Danish-Swedish forensic autopsy teams worked in Kosovo from late July through October 1999. Altogether five forensic pathologists, one forensic anthropologist, and six autopsy technicians worked in six different teams in shifts of approximately two weeks, in most instances overlapping one or two days at each change of shift.

The method applied was that of “mobile autopsy teams,” based in either Pejë (five teams) or Pristina (one team). As members of these mobile teams we drove with our equipment in four-wheel drive UN cars escorted by Kosovo Forces (KFOR) to different sites chosen by the ICTY personnel. The autopsies were performed on site under primitive conditions. Relatives and local people exhumed the bodies under the supervision of ICTY personnel. Only at the largest site, a trench digger supplied by the Danish KFOR was used. The autopsy tables varied from a plastic apron on the ground to wooden boards on cement slabs, horse-carts or picnic tables (Fig. 1). Shade was provided by a tree, a gazebo or, at the biggest site, an inflatable military tent, and water supply was sparse and mostly used for washing hands and instruments after the work was completed.

According to the ICTY instructions, the main purpose of the autopsies was to establish the cause and manner of death. Identification was of less importance, but clothes, personal belongings, medical and dental status were recorded routinely. In most cases, the identity of the deceased was known prior to the autopsy, either by a name tag on the body, in the coffin, on the grave, or because the body had been buried by the relatives who aided in the exhumation. In other cases, relatives identified clothes or personal belongings found on or together with the dead body (Fig. 2). Dental and medical findings were only rarely used as means of identification as no antemortem information was available. The age of the unidentified was roughly estimated, when possible, and categorized as old, adult, or child.

The majority of the examined bodies was buried, in most cases, shortly after death. At some sites, the dead bodies had been set on fire and the remains either left as they were or buried. In some cases the bodies were only partly burnt, in others, only a few charred bones remained. A small fraction of the examined bodies were found above ground, e.g., in wells, in houses, on riverbanks, in rivers, or in woods. In all instances, the autopsy was performed months after death (1 to 18 months), and the bodies exhibited post-mortem changes accordingly.

The template of the autopsy report was modified from a template previously used in Bosnia, and adapted to the specific requirements in Kosovo. ICTY did not define how the results should be pre-



FIG. 1—Open air autopsy in a field in the village Zahac.



FIG. 2—Items found on a body used for identification.

sented; the only instructions given were that the investigations should be performed according to “national standards.”

Results

The Danish-Swedish teams examined 69 grave sites located in 52 different geographic areas. Most of these areas were within the Italian KFOR sector, but one team worked in the US sector. Twenty-three of the sites contained only one grave/body. The largest site was in an Albanian cemetery in the town of Pejë. Here, approximately 200 recently dug graves were opened and 62 bodies found, all in separate graves. The remaining graves had been emptied or contained clothes and/or other personal belongings. Five

graves contained more than one body. The largest “multiple burial” (1) grave contained 31 bodies, individually wrapped in one or more blankets. Two other “multiple burial” graves were found, with five and four bodies, respectively. Only two “mass graves” (cf. 1) were examined, containing four and three bodies, respectively.

A total of 308 bodies were examined, 244 males, 51 females, and 13 cases in which the sex could not be determined (Table 1). Two thirds ($n = 210$) of the bodies were identified with equal percentages for males and females (Table 2). The persons identified were between 5 and 101 years old. Most males were adults, with a fairly even distribution between the ages 21 to 70 years. The females were more or less evenly distributed over all ages (7 to 91 years) (Fig. 3). The median age was 47 years with the 10th percentile and

TABLE 1—Age distribution.

Estimated Age	Unidentified Persons				Identified Persons			Total			Sex Unknown	
	All	M	F	Sex Unknown	Years of Age	All	M	F	All	M		F
Old	13	5	8	0	>60	53	39	14	66	44	22	0
Adult	63	54	8	1	18–60	134	118	16	197	172	24	1
Child	2	2	0	0	<18	12	9	3	14	11	3	0
Unknown	31	17	2	0		31	17	2	12
Total	109	78	18	1		199	166	33	308	244	51	13

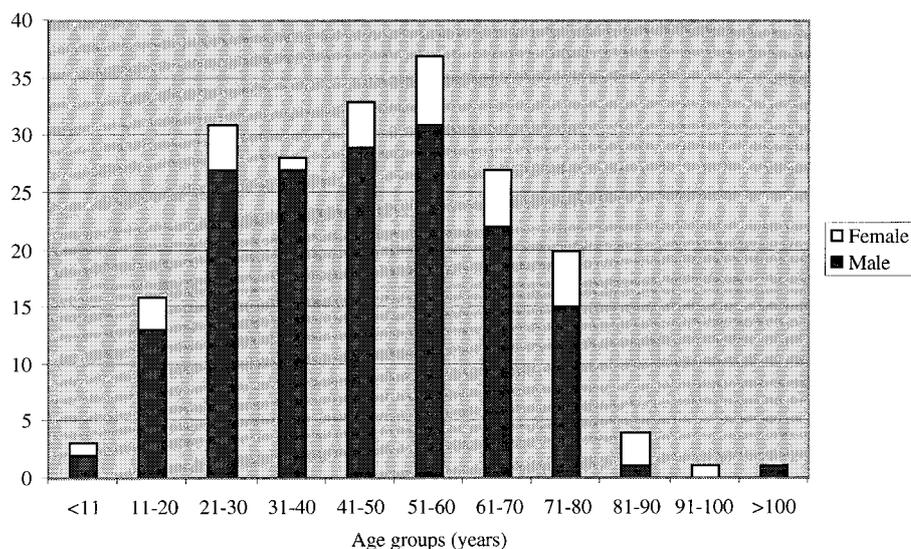


FIG. 3—Age distribution of identified males and females in decades.

TABLE 2—Distribution by sex.

Sex	All	Identified
Male	244	175
Female	51	35
Unknown	13	0
Total	308	210

TABLE 3—Percentiles of the age distribution in years.

Level	Min	10%	25%	Median	75%	90%	Max
Female	7	15	30.50	57	72	86.6	91
Male	5	21	30.25	45	60	71	101

TABLE 4—Condition of body.

Condition	n
Decomposition, moderate	81
Decomposition, severe	99
Mummification, moderate	32
Mummification, severe	6
Burned, moderately	6
Burned, severely	53
Adipocere formation, moderate	29
Adipocere formation, severe	1
Skeletonized, partly	49
Skeletonized, largely	31
Skeletonized, completely	51

90th percentile 21 and 73 years, respectively. The median age for women (57 years) was higher than the median age for men (45 years) (Table 3). The distribution of the estimated age of the unidentified did not seem to differ from that of the identified (Fig. 3).

More than half the number of bodies were moderately or severely decomposed, and just under half were skeletonized to some extent. Mummification and adipocere formation was seen in 68 (22%) cases, and 53 (17%) were severely burned (Table 4).

Firearms and explosives (gun shot wounds $n = 188$, other explosives $n = 11$) constituted the most common cause of death (65%) with no difference regarding sex. Blunt trauma ($n = 11$) and sharp force injury ($n = 3$) were rare causes of death, but cases with a combination of lethal gun shot wounds and nonlethal sharp force injury were also found. Ischemic heart disease was determined as the cause of death in three cases. In 29% of the cases ($n = 90$) the cause of death remained unknown (Table 5).

The manner of death was homicide in 200 cases (65%) with no difference regarding sex; act of war in eight cases (all males); there were two cases of accidental death and eight natural deaths. In 90 cases (29%) the manner of death remained undetermined (Table 6).

TABLE 5—Cause of death.

	All	Male	Female	Sex Unknown
Firearms and explosives (firearms)	199 (188)	170 (160)	28 (27)	1 (1)
(mines, grenades, etc.)	(11)	(10)	(1)	(0)
Blunt force	11	6	5	0
Stab wounds	3	0	3	0
Disease	3	3	0	0
Other	2	1	1	0
Unknown	90	64	14	12
Total	308	244	51	13

TABLE 6—Manner of death.

	All	Male	Female	Sex Unknown
Homicide	200	167	32	1
Act of war	8	8	0	0
Accidental	2	0	2	0
Natural	8	5	3	0
Undetermined	90	64	14	12
Total	308	244	51	13

Eight victims (3%) were positively identified as soldiers/paramilitaries. Only five victims showed signs of torture or other antemortem violation of the human rights, e.g., blindfolding, rope around scrotum, and handcuffs.

Discussion

When evaluating the results presented here, one has to bear in mind that the cases investigated do not necessarily constitute a representative proportion of those who died during the conflict in Kosovo. The autopsies were performed on request of the ICTY in order to present evidence of war crimes and cases where such crimes were suspected were probably over represented because of selection bias, whereas other types of death, e.g., act of war and natural death, were under represented. Furthermore, it must be remembered that our investigations were performed in limited geographical regions of Kosovo and the number of cases (bodies) constitute only a small part of all persons killed during the conflict. The total number of autopsies performed in Kosovo in 1999 was 2108 (Carl Hogan, ICTY, personal communication). Knowing these limitations we have cautiously tried to evaluate our results and compare them with studies done elsewhere in the former Yugoslavia.

Using a definition of a mass grave as a grave where "at least half a dozen bodies have been placed indiscriminately and tightly together with no reverence for the individual" (1), we did not investigate any mass graves. On the contrary, a majority of the bodies was buried in individual graves. An explanation to this could be that persons who had kinship with the deceased buried the bodies when the perpetrators left the scene after the killings.

The finding of many empty graves in Pejë Cemetery is remarkable. We do not know, however, whether this finding was the result of an attempt to cover up war crimes or the result of the relatives' wish for quick reburials, or both.

In a war situation, one will expect that a majority of the victims is killed by firearms. Nevertheless, a review of the literature shows

that the number of people killed by firearms has been reduced through the years, from approximately 75% in the American Civil War to 19% in the Gulf war. Instead the number of injured and killed by bombs, mines, and other explosives seem to have increased. In the Korean War 64% were killed by bombs and explosives, in the Gulf war 81% were injured or killed in this way, whereas only 19% were injured by firearms (2). Even though there are many explanations to the differences between these studies, the number of persons killed by firearms is very high in our material (61%), whereas the number killed by mines or other explosives is very low. The high number of casualties from firearms and the fact that the victims mainly were civilians corroborates that our findings are a result of war crimes rather than a result of warfare. This conclusion is of course also strengthened by the manner of death, the demographic characteristics of the deceased, and the consistency between witness testimony and autopsy findings.

Identification was judged by ICTY as being of less importance, whereas the main purpose of the investigations was to establish the cause and manner of death, and thereby, aid in the evaluation of whether systematic executions had taken place, facilitating a prosecution for war crimes.

As we did not have any antemortem information on missing persons, which is common in a war situation (3,4), the forensic, anthropologic, and odontologic recordings contributed only in exceptional cases to identification of individuals. For practical and economical reasons DNA typing was not possible (5,6). Many of the victims were identified prior to the autopsy, but when identification was done afterwards, it was based on recognition of clothes or other personal belongings. All the identified persons were Kosovoalbanians and six of the act of war victims were Serbian soldiers. The ethnic background of the unidentified bodies was not known, but presumably, most of them were Kosovoalbanians.

In some of the cases the sex could not be determined, most often in cases where only part of the body remained. In spite of this it was remarkable that the percentage of women in our material was nearly the double of that found in material from the war in Croatia (2). In our material, the age interval was 5 to 101 years, with a high median age of 47 years. This differs markedly from the situation in Croatia, where more than half of the dead was between the age of 21 to 35 years, many of whom were soldiers (2).

Even though our material was selected, the number of bodies identified as soldiers was very low (3%), e.g., compared with the findings in Croatia (2,3). When reviewing the literature it seems as if the percentage of civilians killed in war increases with time. In the First World War, calculations showed that 19% of the killed were civilians, in the Second World War and the Vietnam War 48%, and in the war in Croatia in the 90's 36% (2) up to 66% (3).

We found signs of torture or antemortem torturelike treatment in only five cases. This is a low number (3), but many of the bodies were in a condition that did not allow any conclusions in this respect. Furthermore, a number of victims had been severely injured and afterwards left to die, according to witnesses and in consistency with the autopsy findings.

The method applied, i.e., working in small and mobile teams, was found to be effective when examining single or few bodies spread out over many different sites, enabling maximal mobility and flexibility. It was also an advantage that the statements from different witnesses could be compared immediately with the findings at the autopsy, and that personal belongings could be handed over to the relatives with minimal administrative effort. However, the immediate presence of relatives and friends of the deceased

also had a disadvantage, as they occasionally were difficult to keep away from the autopsy area. Other disadvantages were that the team had to spend time on transportation, and that X-ray equipment could not be used, e.g., to localize bullets. On the other hand, as full metal jacket bullets were used, only few bullets remained within the bodies.

Conclusion

The results of the examination of the 308 bodies in Kosovo showed that the vast majority was male civilians, the age span was large, the most common cause of death was gunshot wounds and the most common manner of death was homicide. Contrary to previously published results from investigations of war crimes in other parts of the former Yugoslavia, the bodies examined by the Danish-Swedish teams were found in single graves instead of mass graves, and a majority of the bodies had been identified prior to the autopsy.

An important conclusion from our work in Kosovo was that the method of mobile autopsy teams was very effective when working under circumstances as described, with many small sites spread over a large area.

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