



Pathology Biology Section – 2006

G25 Differential Diagnosis: Antemortem vs. Postmortem Bone Trauma

*Nermin Sarajlic, MD, PhD**, International Commission on Missing Persons, Alipasina 45A, Sarajevo, 71000, Bosnia and Herzegovina; *John Clark, MRCPATH*, University of Glasgow, Joseph Black Building, Glasgow, Scotland G12 8QH, UK; and *Eva-Elvira Klonowski, PhD*, International Commission on Missing Persons, Alipasina 45A, Sarajevo, 71000, Bosnia and Herzegovina

The goal of this presentation is to evaluate the difficulties in differentiation between antemortem and postmortem bone trauma in human skeletal remains

This presentation will impact the forensic community and/or humanity by demonstrating how antemortem - postmortem bone trauma is always challenging for the forensic pathologists who have to deal with predominantly skeletonised remains. This presentation will have an impact on forensic sciences by demonstrating a way of judging bone trauma on skeletonised remains.

Four years of the war in Bosnia and Herzegovina from 1992 to 1995 has left more than 30,000 missing persons, most of whom are presumed dead. Until now, between 14,000 and 16,000 sets of human remains have been exhumed from numerous single or mass graves in burials, wells, septic tanks and caverns, or as bodies simply left unburied in fields, meadows and forests. The majority of the remains were completely skeletonized, but occasionally they were saponified or mummified.

Variable burial conditions and variable decomposition of the remains caused deterioration and injuries to the bones. Also, the transfer of the remains from primary to secondary, or even tertiary, mass graves, and the different techniques used during the exhumation process, caused postmortem injuries to the bones.

Postmortem examination of the remains to determinate antemortem injuries revealed a considerable amount of additional postmortem damage.

Assessment of antemortem injuries is not only important in the legal process in order to determine cause and manner of death, but it is also helpful in the identification process, when considering antemortem information obtained from family members or witnesses about injuries sustained.

Cases from the authors' work on exhumed skeletal remains, discuss the injuries seen, and consider potential causes will be presented (in particular, consideration will be given to):

- cases with clear signs of antemortem trauma to the bones
- cases with clear signs of postmortem trauma to the bones
- cases with postmortem injury possibly due to the influence of the saponification process during the decomposition
- cases in which it is not possible to determinate whether the trauma is antemortem or postmortem

Forensic Pathology, Skeletal Remains, Bone Trauma