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The Odontological Identification of the Unknown Bodies

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Introduction

The examination of the causality and cause of death in cases of unnatural death including non-identified people is ordered by the public prosecutor (§ 159 StPO). Inquest and autopsy belong to the code of criminal procedure (§ 87 StPO). The identification of the bodies has to be done before the autopsies begin (§ 88 StPO). Fingerprints, measurements and photos for the police records department are ruled by law (§ 81b StPO).

Objectives

The identification of the two bodies by taking fingerprints was impossible (Fig. 1).



Fig. 1

Both, driver and passenger - burned beyond recognition - it was supposed they concern to be some special people (Fig. 2a and b).



Fig. 2a

Fig. 2b

Material and Methods

The odontological section begins by opening the lips to remove the jaws (Fig. 3).



Fig. 3

The exarticulation of the jaws using oscillating saws (Fig. 4).



Fig. 4

The removal of the upper jaw follows the Le Fort-I-osteotomy (Fig. 5).



Fig. 5

Afterwards the jaws are macerated by enzyme "Enzyrim" (Fig. 6).



Fig. 6

The methods of maceration used so far seem to be imperfect (toxic, offensive smelling, difficult to clean up). The use of enzyme for maceration accelerates the catalytic process enormous. This method is cheap, easy to handle, non-toxic and easy to clean up. The procedure at all needs only two hours (3).

Proceedings

The ultrasonic appliance works with 35.000 Hertz. The water should be heated for two hours up to 60 degrees Celsius. Per litre water 10 ml washing powder and 20 ml Enzymim are added (Fig. 7).



Fig. 7

For one people orthodontic plaster casts could be used (Fig. 8).



Fig. 8

Comparison of the lower jaw with the plaster cast of the first body (Fig. 9).



Fig. 9

A-M x-rays and A-M dental records existed from the second person (Fig.10).



Fig. 10

Comparison of the OPG with the upper jaw of the second body (Fig. 11).



Fig. 11

The results are transferred to the P-M-DVI-Form together with the information where the victim (house, car, boat aeroplane, train etc,) was found at the time of the event (Fig. 12).

P.-M.-DVI (2014) VICTIM IDENTIFICATION FORM F2	
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Nature of disaster: <u>car accident</u>	No: <u>1</u>
Place of disaster: <u>Germany</u>	Sex unknown: <input type="checkbox"/>
Date of examination: <u>21</u> Day <u>07</u> Month <u>2013</u> Year	Male <input checked="" type="checkbox"/> Female <input type="checkbox"/>
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THE IDENTIFICATION OF THE UNKNOWN DEAD

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Abstract
The identification of burned bodies correlates with an adequate quality and quantity of traces (1,2). By car-accident two adults burned and died. A third could be rescued by fire-fighters and was transferred to the hospital. The identification of the dead bodies was made exclusively by odontological comparison of ante-mortem plaster casts, x-rays and a-m(p)-m records after oral section and maceration of the removed jaws.

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Key words
Enzym maceration, forensic odontology, identification, oral autopsy techniques


Legal background
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Removal of the upper jaw follows the Le Fort-3-osteotomy (Fig. 5).




Afterwards the jaws are macerated by enzyme "Enzyrim" (Fig. 6).




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The ultrasonic appliance works with 35.000 Hertz. The water should be heated for two hours up to 60 degrees Celsius. Per litre water 10 ml washing powder and 20 ml Enzyrim are added (Fig. 7).




For one people orthodontic plaster casts could be used (Fig. 8).




Comparison of the lower jaw with the plaster cast of the first body (Fig. 9).



A-M-OPG from the second body (Fig. 10).



Comparison of the OPG with the upper jaw of the second body (Fig. 11).




The results are transferred to the P-M-DVI-Form DVI-Form together with the information where the victim (house, car, boat, aeroplane, train etc.) was found at the time of the event (Fig. 12).

If the identity cannot be solved within two weeks publications follow in the dental journals as "Rheinisches Zahnärzteblatt" or "Zahnärztliche Mitteilungen".

Abbreviations

A-M(P)-M = Antemortem/Post-mortem
OPG = Orthopantomography
SPO = Code of criminal procedure



Results and Conclusion

The expertise leads to conclusion. Positive identification of burned bodies by dental radiological and morphological methods is possible (4).

The characteristics of the presented samples were the extremely carbonization of two bodies with orthodontic treatment. The permanent first premolars of the upper and the lower jaw were extracted. The gaps had been closed by orthodontic apparatuses.

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