The forensic diagnosis of cervical spine lesions during the discovery of human bones

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ABSTRACT
The discovery of a corpse reduced to the states of bones, headless, has always raised particular medico-legal problems, especially during the 1990’s, when Algeria was confronted with dramatic events that only a few countries had known.

Among the main issues raised are the problem of identification of the person, the cause of death, the dating of death, the diagnosis and the nature of the lesions.

Through our work, we will expose the progress of the anthropological expertise at the forensic medical department of Mustapha University Hospital during the discovery of 56 human skeletons in a well at Haouch Hafiz after the massacre of summer 1997.

INTRODUCTION
The forensic anthropology expertise of human bones has always raised many medico-legal problems. The mission of the expert becomes more complex if the body has undergone significant degradation in relation to environmental or physical factors...

The absence of a methodology or a medico-legal consensus between the various actors (judicial police officer, medical examiner, crime scene technicians...) will make the mission of the expert very difficult. Among the main issues raised are the problem of identification of the person, the cause of death, the dating of death and the origin of the bone lesion found...

Several problems complicate the situation even more: the multiplicity of the victims, the incomplete bodies, the bones without traces of violence, the lack of comparison’s elements...

FORENSIC EXPERTISE
Context : Between 1993 and 1996, the buildings of Haouch Hafiz, a farm located a few kilometres from the eastern suburbs of Algiers, served as an advanced GIA station, a bomb-making workshop and a place of torture for abductees who were executed then tossed in the well next to the farm.

Haouch Hafiz is taken over by security forces during the major military operation that followed the massacres of summer 1997.

Forensic investigations at the place of discovery :
- Locating and photographing places (Fig. 1, 2)
- Coordination meeting between the different actors ;
- Setting up the necessary means of investigation (metal detector...)
- Photograph of bone parts ;
- Collection and sealing of bone parts ;
- Coding of samples ;
- Soil sampling...

In the laboratory :
- Macroscopic examination of bone parts ;
- Cleaning and photography of bones parts (Fig. 3) ;
- X-Ray and CT scan ;
- Histological study of suspicious lesions ;
- Soil survey and weather report...

RESULTS
The number of bodies discovered in the well : 56 bodies

The demographic profile :
- Distribution by sex : 52 men and 04 women
- Age range : [15—78] years old

Forensic finding :

Decapitated bodies
Bodies showing no trace of violence
Bodies with gunshot wounds
Presence of an evocative index of an execution by slitting

Finding of lesions in the cervical spine :

<table>
<thead>
<tr>
<th>Lesion Type</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
<td>1st cervical vertebra</td>
<td>02</td>
</tr>
<tr>
<td>2nd cervical vertebra</td>
<td>03</td>
</tr>
<tr>
<td>3rd cervical vertebra</td>
<td>02</td>
</tr>
<tr>
<td>4th cervical vertebra</td>
<td>01</td>
</tr>
<tr>
<td>5th cervical vertebra</td>
<td>01</td>
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<tr>
<td>6th cervical vertebra</td>
<td>01</td>
</tr>
<tr>
<td>7th cervical vertebra</td>
<td>01</td>
</tr>
</tbody>
</table>

DISCUSSION
The demographic distribution of the victims shows that most of them were men belonging to a very large age group.

75% of the victims had evidence suggestive of a slaughter execution mechanism. Among these clues it was possible to note the presence of bondage links of the wrists and the ankles, the presence of tissue or newspaper inside the mouth and the presence of blood stains on the upper part of the clothes.

The second cervical vertebra was the most affected when cervical lesions were found.

CONCLUSION
The use of new technologies in the field of forensic anthropology turns out to be necessary, just as well as the postgraduate training of forensic doctors and the in-service training of magistrates and judicial police officers.

It is also necessary to standardize forensic procedures with the setting up of forensic guide for natural or induced disasters.

And it would also be wise to create a joint forensic journal for magistrates, forensic doctors and judicial police officers, which could strengthen the links and the means of communication between the various actors on the crime scene.

REFERENCES
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