

PROBLEMS IN THE IDENTIFICATION OF BURN VICTIMS¹

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ABSTRACT

The identification of burn victims presents to the forensic pathologist problems for which he may not be physically or mentally prepared, in particular if he practices as a part-time specialist. Two case histories are given to illustrate different modes of approach and solutions to different aspects of this problem.

RÉSUMÉ

L'identification des victimes d'incendie présente pour le pathologiste judiciaire, des problèmes pour lesquels il n'est ni physiquement ni mentalement préparé, surtout s'il ne pratique qu'à temps partiel. Deux cas réels servent à illustrer différentes façons d'aborder le problème et d'en solutionner les divers aspects.

CASE I

A light aircraft, the single occupant of which was a 41-year-old female commercial pilot, took off on a routine flight of approximately a hundred miles in Saskatchewan. When the aircraft failed to arrive at its destination a search was instituted and it was found crashed and burned approximately ten miles from its departure point. A single incinerated and unrecognizable body was found in the wreckage. The family of the pilot was emotionally unwilling to accept her death, until definitive identification could be secured.

Despite the initially unprepossessing appearances of the body, (Fig. 1), it was possible to find and identify a uterus with leiomyomas present in its wall (Fig. 2). The sex and presumptive age of the pilot were established thereby. Ante-

mortem dental records were available; the remaining jaws were excised at autopsy (Fig. 3) and comparison by a forensic odontologist permitted definitive investigation.

This case exemplifies the success of routine methods of identification routinely applied. It is necessary to be persistent in the face of initially unprepossessing material and for the pathologist to utilize every possible means at his disposal. Despite superficial charring of organs, incision in the pelvis will often reveal internal genitalia — prostate or uterus — sufficiently preserved for gross and microscopic identification, or alternatively and particularly in infants may show the juxtaposition of bladder and rectum with no intervening structures, permitting diagnosis of male sex even when the external

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Fig. 1 Case 1—Gross appearance of body



Fig. 2 Case 1—Uterus with leiomyomas



Fig. 3 Case I—Excised jaws

genitalia have been destroyed. The known existence of ante-mortem dental records necessitates the greatest persistence in retrieval of dental remains for comparison by the expert, while even in the absence of such records, if prostheses or reconstructive dentistry are found, the specimen should be preserved for possible comparison against records. Excision of the jaws is the ideal; preservation of their fragments or isolated teeth may also provide definitive evidence.

CASE II

A house fire occurred one night on an Indian reserve in the northwest portion of Saskatchewan and only the concrete basement with its contents of ash and fragments remained standing the next morning (Fig. 4). Several mutually conflicting and incompatible eyewitness accounts of the events leading to the fire were as usual available. There were thought to be eight occupants of the house at the time of the fire and a list of

their names, sexes and approximate ages was obtained from neighbours (Table 1). When the local police representative arrived at the scene next morning, he found the mortician shoveling the various masses of human remains into a single metal coffin of sealer type, with no identification as to their position within the house structure. No scene plan with the positions of the bodies was available, and the material received for examination consisted of the multiple body fragments in a single sealer coffin (Fig. 5).

The bodies were charred, fragmented and incomplete (Fig. 6) and initial investigation was directed to ascertain the number of victims. By the process of visual inspection and sorting the major fragments, and of subsequent X-ray, it was established that portions of nine spinal columns were present. An attempt was then made further to classify the victims by age and sex. Estimation of age was by estimation of body structure apart from one victim in whom X-ray of



Fig. 4 Case II — House after the fire



Fig. 5 Case II — Body fragments as received