

J L Höll, MB ChB, FFRad (D)SA

Department of Radiology, Pretoria Academic Hospital, and University of Pretoria

Forensic radiology

The radiological fraternity has played a significant role in the new South Africa, but taking our previous history into account and living in an era of human rights and social change we must realise that far more will be expected of us, including in the field of forensic radiology.

Forensic pathology was the first field of medicine to use the new Ray as described by Roëntgen on 8 November 1895. Long before any pathological diagnosis had been made, or the field of diagnostic radiology came to be a specialty, court cases were won or lost on exposures made within weeks of the official announcement lecture by Wilhelm Roëntgen on 23 January 1896.¹

On 6 January 1896 a journalist in the *New York Sun* erroneously but prophetically stated '... the professor [Roëntgen] is already using this discovery to view broken limbs and bullets inside human bodies'.²

An exposure done on a certain Tolson Cunnings of Montreal, Canada on 7 February 1896 revealed a bullet lodged between the tibia and fibula. The bullet was extracted and used in testimony in court, which led to the imprisonment of a Mr George Holder for 14 years.¹

All these facts are interesting, but our concern today must be the setting up of a civilised society where forensic radiology can and must play a role.

We tend to think of forensic roentgenology as the discipline that helps to save battered children, but we are also expected to use this knowledge to help the police bring perpetrators to bay, to assist with age determination of criminals and people awaiting trial, and similarly to place patients into their correct age group surroundings in mental institutions.

The curriculum for training radiologists includes forensic pathology, but are we really serious about this training? I know of only a small group of radiologists in South Africa with some interest in this field. Is it because of a lack of training, or are we hiding from the dead and resistant to experiencing the bad side of life in our own field of specialty? Maybe we are afraid of courts and time spent in creating a more civilised society.

Those of us with interest in this field still use publications that are long overdue for revision. For instance we use the *Radiographic Atlas of Skeletal Development of the Hand and Wrist* by Greulich and Idell Pyle published in 1959. As noted in the preface to this publication, these studies were done on white Americans of North European descent between 1929 and 1950.³

To a certain extent modern publications still refer to classic texts such as that of Paul Hodges⁴ from 1933. Some minor changes came about with the introduction of other work, e.g. that by Girdang and Golden published in 1952.⁵ However it is important to realise that while 50+ years in evolution is not a long time, living standards have changed tremendously over the last 2 - 3 generations and we must expect some changes in bone maturation. Also the publication by Gustofson⁶ on age determination using the third molar was done in the 1960s on North European children.

While using all these publications and more recent additions, we are still working with a unique population in the southern tip of Africa. My request to the radiological fraternity is to pay more attention to the curriculum, and to improve our knowledge on forensic work. Maybe someone somewhere will start work on a publication or textbook that can fill the gap in forensic radiology and be used to benefit our very specific population. This publication will lead us into the 21st century.

1. Brogdon BG. *Forensic Radiology*. Boston: CRC Press, 1998: 16 - 20.
2. Sprawls P, ed. *The X-ray Department of Radiology Centenary, Emory University, Georgia, Atlanta, Georgia*: Emory University Press, 1995.
3. Greulich WW, Idell Pyle S. *Radiographic Atlas of Skeletal Development of the Hand and Wrist*. Stanford, California: University of California Press, 1959.
4. Hodges PC. *Development of the Human Skeleton*. Part 1. University of Chicago Press, 1933.
5. Girdang BR, Goldon R. Centers of ossification of the skeleton. *Am J Radiol* 1952; **68**: 922.
6. Gustofson G. *Forensic Odontology*. London: Staple Press, 1966: 12 - 14.

Julian L Höll

Guest Editor