



Practitioner's Corner

ITEMS OF DENTAL INTEREST FROM THE RAYMOND DART COLLECTION OF SKELETONS
– DEPARTMENT OF ANATOMY, UNIVERSITY OF THE WITWATERSRAND

* A. Volchansky, D. Banks and E. Vieira

One does not often have an opportunity to examine dental pathological lesions in dried skulls. During a metric study using skulls in the Raymond Dart collection in the Department of Anatomy at the University of the Witwatersrand, such an opportunity arose. A fascinating variety of bony defects and dental abnormalities have been seen, a number of which are reproduced below. The photograph of each lesion is accompanied by an intra-oral radiograph of the same area.



Fig. 1. (a) Periapical dental lesion. Massive decay of a lower first molar in a Bantu skull of unknown age. The buccal plate of bone has been destroyed over the distal root and part of the mesial root. When compared to the intra-oral radiograph Fig. 1. (b), the lingual plate of bone can barely be seen and the bone destruction appears to have reached the apices of both roots. The area of decay, as seen on the radiograph extends into the bifurcation of the tooth, while this was not obvious macroscopically.

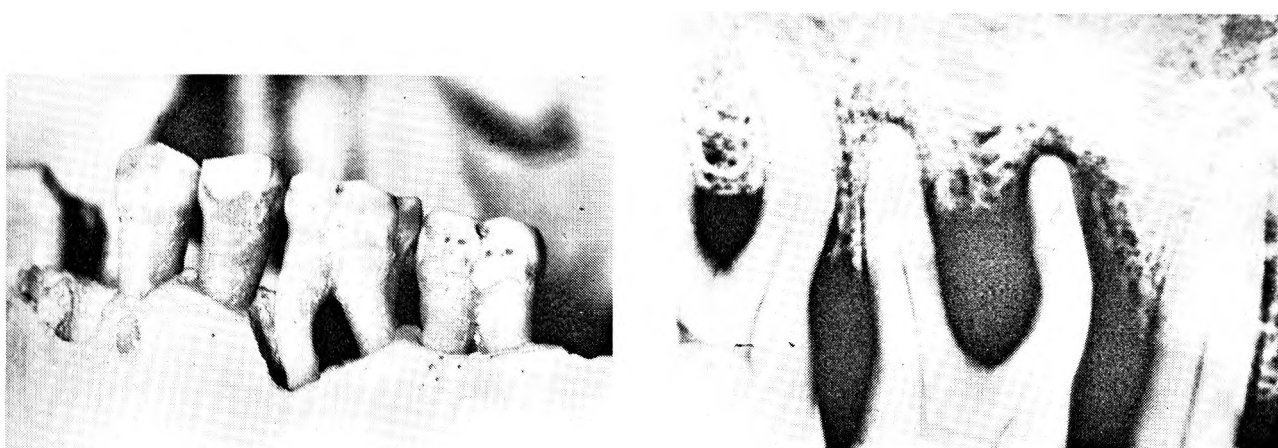


Fig. 2. (a) A view of a buccal segment of a mandible of a Nyasa female aged 50 years. A periodontal bony lesion is seen around a lower first molar with bone destruction between the roots and along the mesial aspect of the tooth. The interradicular bone loss extended from the buccal to lingual side, in periodontal terminology, a through and through lesion. The radiograph Fig. 2. (b) shows a slightly different picture, firstly there appears to be alveolar bone loss between the roots of the second molar, which is not seen on the photograph of the mandible. The height of bone distal to the first molar is clear, but mesially the lingual bone is not seen, and the appearance of bone damage is to the apex.

* Dental Research Unit of the South African Medical Research Council and the University of the Witwatersrand, Johannesburg, South Africa

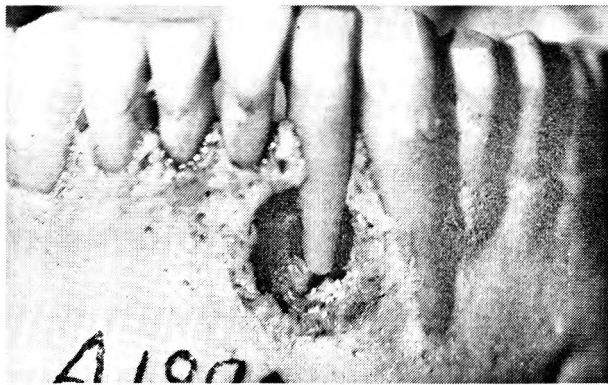


Fig. 3. (a) A photograph of a periapical lesion of a lower lateral incisor in the skull of a Xhosa male aged 53 years. The bone damage is along the labial face of the root and a wide circumscribed lesion. The lingual plate of bone may be seen, while the apical tip of the root is on the mesial aspect. This may have been a root tip fracture with a resultant periapical lesion. The radiograph Fig. 3. (b) shows the tip of the root quite clearly. The lingual plate of bone is not clear and the bone damage appears to extend to the central incisor.

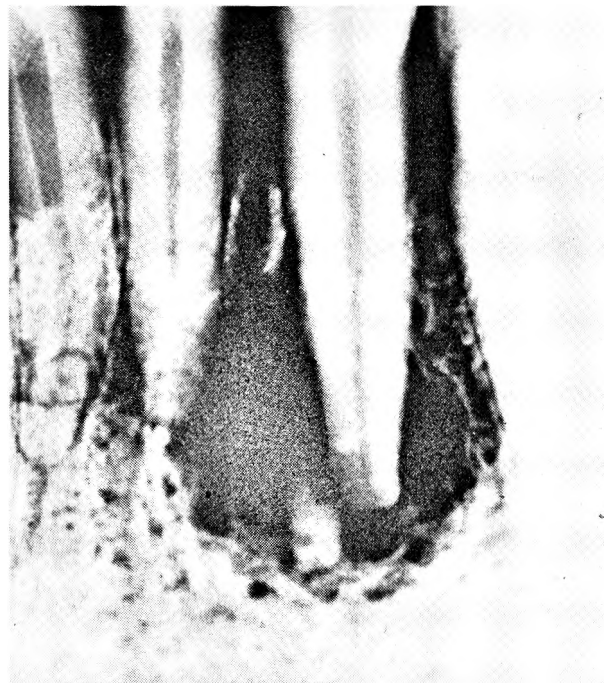


Fig. 4. (a) Carious destruction of a lower molar, only the roots remain and appear to have over-erupted. The alveolar bone damage extends to the apices of the roots and only the lingual plate of bone remains. This is a skull of a Nyasa female aged 32 years. The radiograph Fig. 4. (b) shows the lingual plate of bone and the demarcation of the buccal bone destruction.

Amongst the collection of some 2,000 skulls was one of a 10 year old white child demonstrating various stages of eruption of the permanent dentition.

See fig. 5 on page 225

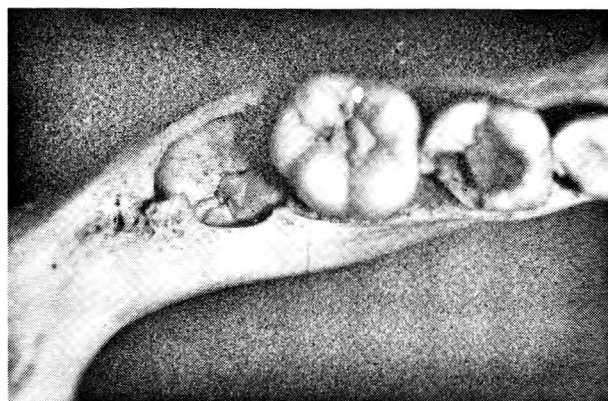


Fig. 6. (a) An occlusal photograph of the mixed dentition. The second mandibular molar is just visible. The intra-oral radiograph Fig. 6. (b) shows the position of the second molar and the permanent premolar, on either side of the first molar.



Fig. 5. (a) The left side of the mandible where the canine has perforated the mandibular bone. The deciduous canine is directly above the erupting tooth. The intra-oral radiograph shows the prominence of the canine plus the developing adjacent premolars.

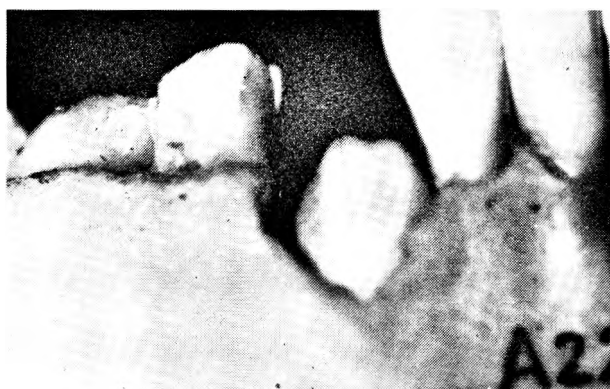


Fig. 7. (a) A further example of eruption in this 10 year old child. The canine has just appeared into the deciduous space. Fig. 7. (b) A photograph of the intra-oral radiograph demonstrates the position of the erupting canine and the developing premolar.



ACKNOWLEDGEMENT

With gratitude to Professor P.V. Tobias, Professor of Anatomy, University of the Witwatersrand for making the collection available to us.