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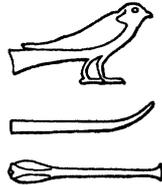
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## THE PRACTICE OF DENTISTRY IN ANCIENT EGYPT

By F. FILCE LEEK



HERODOTUS, during his travels in Egypt about 450 B.C., wrote: 'The practice of medicine is so divided among them, that each physician is a healer of one disease and no more. All the country is full of physicians, some of the eye, some of the teeth, some of what pertains to the belly, and some of the hidden diseases.'<sup>1</sup>

If only Herodotus had needed dental care during his residence in Egypt he might also have described the methods and remedies used. Unfortunately such is not the case and we have to rely for much of our knowledge on the surviving medical and other papyri. From these documents we can gain an insight into and understand a little of the philosophy underlying the remedial practices of the ancient Egyptians.<sup>2</sup>

A very human document which occurs in a literary miscellany of the Nineteenth Dynasty contained in Pap. Anastasi IV (B.M. 10249, 12. 5-13. 8) consists of the lament of an Egyptian official who bewails the hardships he endures in his station at a lonely outpost. At the end of his harangue he mentions the sufferings of one of his colleagues: 'A *mns*-scribe is here with me, every muscle of whose face twitches; the *wštt*-disease has developed in his eye, and the worm grows into his tooth. I cannot leave him to his fate.' This is one of the earliest instances known of the belief that toothache is caused by a worm.<sup>3</sup>

The examination of a selection of skulls of the New Kingdom shows clearly that the sufferer was indeed fortunate that only one tooth was affected. To illuminate this last sentence it is necessary to digress from the theme of the foregoing discussion and consider some aspects of dental pathology. By far the greater proportion of the teeth of adult ancient Egyptians shows extensive wear of the occlusal surfaces (pl. VIII, 1)

<sup>1</sup> II, 84. Translation of A. D. Godley (Loeb Classical Library).

<sup>2</sup> Much of what is written here depends on the published work of Warren R. Dawson and also on private correspondence and conversation between him and the present writer. Two essays of his which are particularly fruitful are 'Egypt's Place in Medical History' in *Science, Medicine and History*. Essays on the evolution of scientific thought and medical practice written in honour of Charles Singer (Oxford, 1953), 47-60; and 'Medicine' in S. R. K. Glanville (ed.), *The Legacy of Egypt* (Oxford, 1942), 179-98.

<sup>3</sup> For the text see Gardiner, *Late Egyptian Miscellanies* (Brussels, 1937), 48-49; the sentences here quoted are from 13. 6-13. 7 in the translation of Caminos, *Late Egyptian Miscellanies* (Oxford, 1954), 189. For references on the worm as a disease and as a cause of toothache see Caminos, *op. cit.* 197.

and this wear, in a large number of instances, leads to the exposure of the dental pulp (pl. VIII, 2). Especially is this so in cases where the wear has proceeded faster than the laying down of the protective secondary dentine. When this results in the death of the pulp, bacteria invade the surrounding alveolar bone which eventually becomes infected. This infection leads usually to one of two classes of abscesses, the first a chronic type, in which the bone destruction around the tooth apex proceeds at a slow rate and a growth of inflammatory tissue is produced which varies in size from that of a small to that of a large pea. When pus is associated with the inflammatory tissue it causes absorption of the adjacent alveolar bone and a breakdown in the neighbouring gingival tissue, thus providing a pathway for its escape into the labial or buccal sulcus. When this condition is seen in a dried skull a circular opening is present through the outer and sometimes the inner alveolar plate in the region of the apex of the tooth (pl. VIII, 2). In some cases a cyst may develop (pl. VIII, 3). But pain and discomfort are infrequent symptoms of any of these conditions. The second class of abscess is more virulent, causes great pain, swelling, high temperature, and pus-formation, and can lead, especially without radical treatment, to serious consequences such as osteomyelitis, a condition often observable in ancient Egyptian skulls (pl. IX, 1, 2).

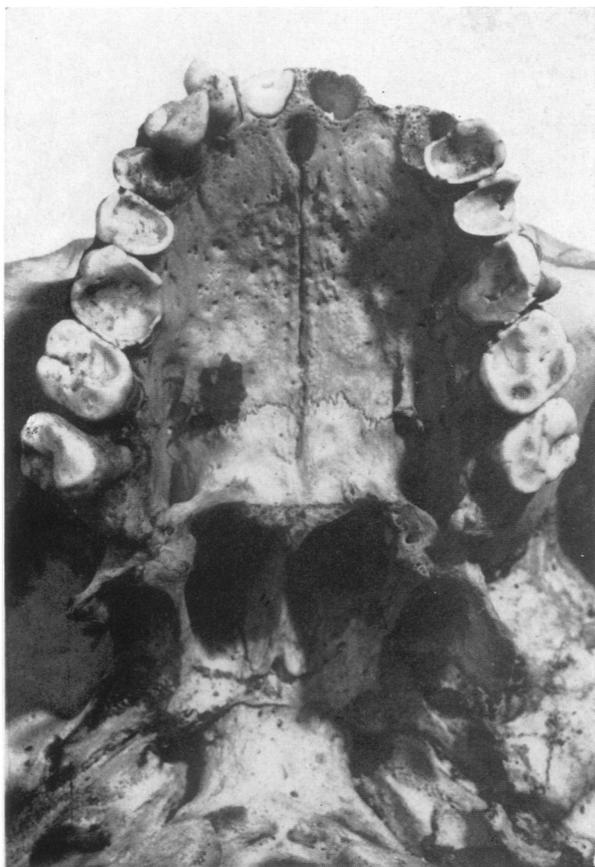
Much of the contents of the medical papyri, some of which contain recipes for diseases of the teeth and gums, dates from the Middle Kingdom, but in some cases the material is preserved only in papyri written during the New Kingdom. The information given in the surviving papyri falls into two groups, that which may claim to be essentially medical in character and that which is mainly magical or superstitious. The contents of some of the papyri fall wholly into the first group, others into the second, and again others contain elements of both, more or less indiscriminately combined.<sup>1</sup> The two most important medical papyri are the Ebers Papyrus, in the University Museum, Leipzig, and the Edwin Smith Surgical Papyrus, now in the possession of the New York Academy of Medicine. It is essential to study the maladies described in these texts and the treatments suggested in order to understand the philosophy on which the approach to the causes and treatment of a disorder was based.<sup>2</sup>

The following is a summary of eleven dental prescriptions taken from the Papyrus Ebers.

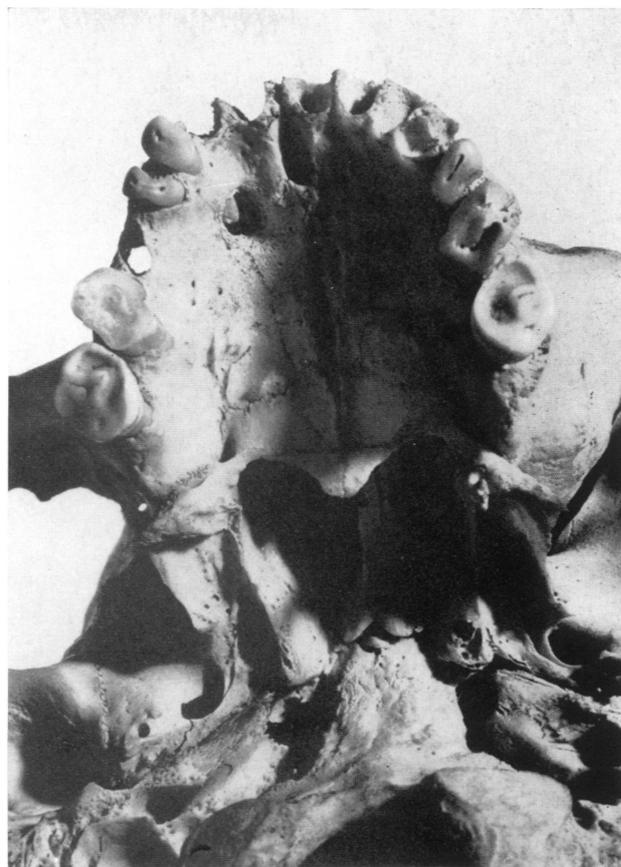
1. Eb. 89. 2-3. For fixing a loose tooth. A mixture of crushed seeds, ochre, and honey made into a paste and applied to the tooth.
2. Eb. 89. 3-4. Another, similar, for pain in the teeth.
3. Eb. 89. 4-6. For toothache. A paste of ground-up vegetable and mineral substances with honey.

<sup>1</sup> The surviving medical documents are treated exhaustively in the important series *Grundriß der Medizin der Alten Ägypter* (8 vols., 1954-63). For an analysis of the principal texts see H. Grapow, *Von den medizinischen Texten* (*Grundriß*, II, 1955); for diseases see id., *Kranker, Krankheiten und Arzt* (*Grundriß*, III, 1956); for translations, id., *Übersetzung der medizinischen Texte* (*Grundriß*, IV, 2 parts, 1958); for hieroglyphic transcriptions, id., *Die medizinischen Texte in hieroglyphischer Umschreibung autographiert* (*Grundriß*, V, 1958).

<sup>2</sup> The text of the Ebers Papyrus is most accessible in Wreszinski, *Der Papyrus Ebers* (Leipzig, 1913); that of the Edwin Smith Papyrus with translation and commentary, in J. H. Breasted, *The Edwin Smith Surgical Papyrus*, 2 vols. (Chicago, 1930).



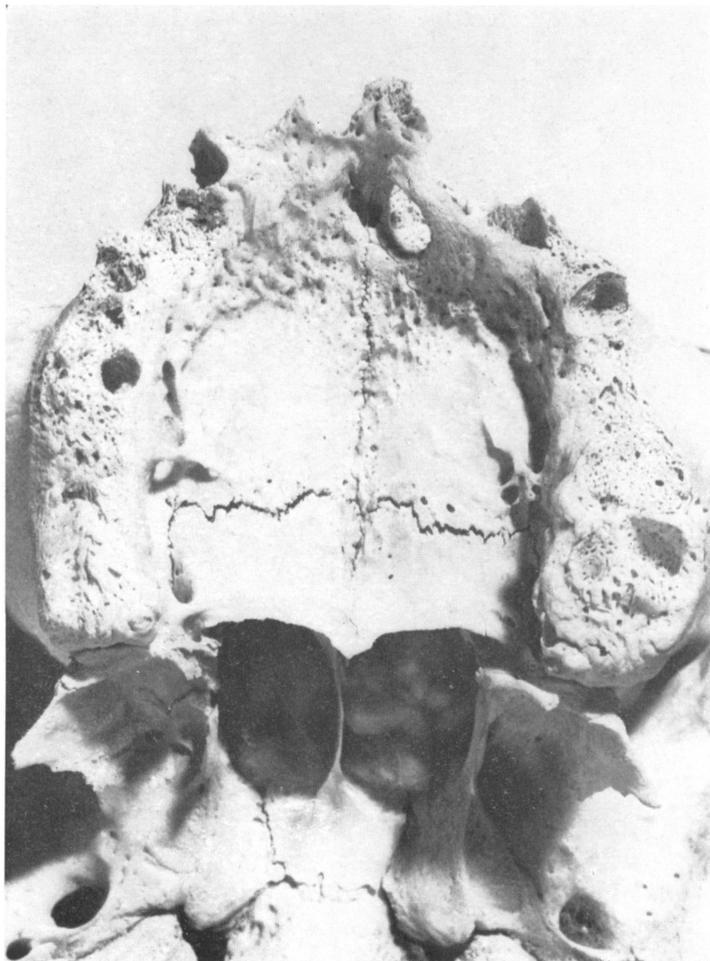
1. Only upper left lateral incisor missing ante-mortem, probably the result of trauma, as indicated by extensive loss of surrounding labial bone; the labial plate being fractured at time of accident and later lost as sequestrum. Excessive wear of cusps of premolars and first molars by attrition has resulted in exposure of pulp-chamber of left second premolar and first molar teeth. *Qâw*



2. Marked occlusal attrition of all posterior teeth, especially premolars, the pulps of which have been exposed. The abscess formation around apex of right premolar has resulted in a large circular area of bone destruction. *Qâw*



3. All the buccal teeth were lost ante-mortem except last tooth on each side. Immediately in front of these teeth are cystic cavities, the one on the left being 13 mm.  $\times$  11 mm.  $\times$  12 mm.; the one on the right being 12 mm.  $\times$  8 mm.  $\times$  10 mm. *Qâw*



1. All teeth except two lost ante-mortem. The extensive loss of alveolar bone is the result of osteomyelitis. Note the circular opening in the apical region of the lateral incisor area which is the result of a cyst. *Hierakonpolis*



2. An edentulous maxilla showing extensive bone destruction resulting from osteomyelitis and abscess formation. *Tarkhân*



3. Roots of the molar teeth are denuded of alveolar bone to below the bifurcation. A large crater seen on the buccal side of the second molar is the result of a periodontal abscess. *Qurna*

4. Eb. 89. 6-7. For a septic tooth (lit. 'a tooth that gnaws into an opening in the flesh'). The ingredients are of an astringent nature: cumin, colocynth, and frankincense.
5. Eb. 89. 7, 9. For fixing a loose tooth.
6. Eb. 89. 8. Another for the same.
7. Eb. 89. 8-9. For treating the teeth by rinsing in the mouth. In this case two plants are to be chewed and spat out. The vehicle is sweet ale.
8. Eb. 89. 10-11. For inflammation of the gums, perhaps stomatitis. The drugs are the homely date and beans, which are to be exposed to the dew, mixed with milk, and chewed and spat out, for nine days.
9. Eb. 89. 11-12. Another for the same. In this case the vehicle is oil and water.
10. Eb. 89. 12-13. A paste for 'making healthy' the teeth. Two vegetable drugs, mandrake and species of *Potentilla*, chewed and spat out. The vehicle is sweet ale.
11. Eb. 89. 14-15. For 'eating blood' in a tooth. This idiomatic expression is understood by Dr. Ebbell to mean 'scurvy'.<sup>1</sup>

All the above remedies are simple external applications, many of the ingredients being of a gritty nature—pounded ochre and other minerals, one of which, called *wḏd*, 'greenstone', is possibly malachite or copper sulphate.<sup>2</sup> The choice of drugs in these and countless other prescriptions for ailments of every kind was probably dictated by the belief in their magical rather than their therapeutic value. It will be noted that most of the remedies are for 'fastening a tooth' or for treating some disorder associated with the gums. None relates to the treatment of carious cavities. This limitation again is what would be expected from an examination of the dental disease seen in skulls of those times. Very few cavities do exist but periodontal lesions are numerous. This condition leads to the loosening of the affected teeth with the sequelae of inflammation and a most painful condition of the surrounding gingival tissue. Mention has previously been made of the almost universal consequence of eating coarse and gritty foods—that of the wearing down of the crown of the tooth. Not only can this attrition be followed by all the pathological sequelae associated with the death of the pulp, but frequently the occlusal equilibrium is altered. In this case masticatory pressures are exerted which are much greater than the supporting tissues can sustain and this leads to inflammation and absorption of the alveolar bone. This loss of the surrounding alveolar bone can progress until the tooth is held in position only by a gingival attachment, and in such cases can be dislodged by digital pressure. During this time the pain and associated minor swelling are noticed in the sulcus, and it is through a sinus or by the gum margin that pus is discharged (pl. IX, 3).

These conditions, which can be diagnosed as 'purulency' or 'eating ulcer', were treated locally with medicaments rather than by removal of the real cause of the

<sup>1</sup> The Ebers Papyrus is translated into English in B. Ebbell, *The Papyrus Ebers* (Copenhagen, 1937).

<sup>2</sup> Harris, *Lexicographical Studies in Ancient Egyptian Minerals* (Berlin, 1961), 102, accepts malachite as the most satisfactory identification for *wḏd*. See also H. von Deines and Grapow, *Wörterbuch der ägyptischen Drogenamen* (*Grundriß*, VI, 1959), 125 ff.

disturbance, namely the affected tooth. This kind of treatment, whilst sometimes ameliorating the painful symptoms, does not prevent the pathological changes from spreading in the surrounding bony and gingival tissues, and these can progress until such time as a whole segment of the jaw is affected. Such cases are frequently to be seen. Unfortunately the Edwin Smith Surgical Papyrus does not contain any reference to dental disease. It is, as its name implies, mainly surgical in character, being concerned principally with wounds, fractures, sprains, and tumours. One of the cases described is, however, of great interest to dental practitioners, as instruction is given for correcting a dislocated mandible, the interesting feature being that the method prescribed is exactly the same as that practised today to restore a displaced mandible to its normal position:

If thou examinest a man having a dislocation in his mandible, shouldst thou find his mouth open (and) his mouth cannot close for him, thou shouldst put thy thumb(s) upon the two ends of the rami of the mandible in the inside of his mouth, (and) thy two claws (meaning two groups of fingers) under his chin (and) thou shouldst cause them to fall back so that they rest in their places.<sup>1</sup>

The dental references in the other papyri are similar to and sometimes identical with those mentioned in the Ebers Papyrus.<sup>2</sup>

There is a complete lack of direct evidence from human specimens concerning any practice of dentistry prior to this time and all the theories concerning it are based on textual evidence. Before reviewing this evidence, especially in so far as it concerns the existence of a dental profession during the Old Kingdom, it is desirable to examine some of the Egyptian terms that appertain to the subject. There are two words in common use meaning tooth:  $\text{𓏏} \text{𓏏}$ , *ibh*, often written  $\text{𓏏}$ , and  $\text{𓏏} \text{𓏏}$  or  $\text{𓏏} \text{𓏏}$ , *nhdt*, *nhdt*; a rarer word is  $\text{𓏏} \text{𓏏}$  *tst*. The contexts in which these various words occur provide few clues to distinguish differences in meaning between them. In some texts *ibhw* and *nhdwt* occur together and it has been concluded that the *nhdwt* may be the larger or molar teeth.<sup>3</sup> It will be noted that the common determinative used in these words,  $\text{𓏏}$ , is not a human tooth, which would be quite difficult to delineate with convincing detail, but the tusk of an animal, probably an elephant.<sup>4</sup> This use is in accordance with Egyptian practice in the writing of anatomical terms whereby the word for the human part is often determined by its animal equivalent.<sup>5</sup>

In a study of the stela of Iry, a monument from Gîza of the late Old Kingdom or First Intermediate Period, Junker has much to say on the practice of medicine in the Old Kingdom.<sup>6</sup> Iry held several titles which indicate medical offices and Junker

<sup>1</sup> Breasted, *Edwin Smith*, case 25, vol. 1, 303 ff.

<sup>2</sup> See Grapow, *Übersetzung der medizinischen Texte (Grundriß, IV)*, I, 65 ff.

<sup>3</sup> For the words for 'teeth' and for this suggested distinction between *ibhw* and *nhdwt* see Lefebvre, *Tableau des parties du corps humain mentionnées par les Égyptiens* (Supplément aux Annales du Service des Antiquités, Cahier 17, Cairo, 1952), 20; Grapow, *Anatomie und Physiologie (Grundriß, I)*, 1954, 41 f. See also Gardiner, *Hieratic Papyri in the British Museum*, 3rd series, the Chester Beatty Gift (London, 1935), I, 126, where in a magico-medical text, tooth (*ibh* written  $\text{𓏏}$ ) and molar (? *nhdwt*) are contrasted.

<sup>4</sup> Cf. Gardiner, *Egyptian Grammar*, Sign List F. 18.

<sup>5</sup> Cf. Gardiner, op. cit. Sign List F. 13 (animal horns for 'brow'), F. 20 (ox-tongue for 'tongue' in general), F. 21 (animal ear for human and other ears), F. 23 (foreleg of an ox for 'forearm'), and others.

<sup>6</sup> See H. Junker, 'Die Stele des Hofarztes 'Iry' in *ZAS* 63 (1928), 53-70.

examines the question of specialization and general practice in ancient Egypt. Commenting on the passage in Herodotus quoted in the opening paragraph of this paper, and linking it with the evidence provided by the stela of Iry, he says:

Das darf aber nicht wörtlich genommen werden; neben den Spezialisten standen gewiß auch zu Herodots Zeiten die Doktoren der gesamten Heilkunde in größerer Zahl; aus der Stele des 'Iry geht hervor, daß jedenfalls im Alten Reich die Verhältnisse anders lagen und ein Arzt Spezialist für mehrere Fächer sein konnte. Andererseits lassen aber die Titel dieser Zeit die Ansätze zu eine weiteren Entwicklung in der Richtung des Spezialistentums klar erkennen, und es ist interessant, daß die von Herodot erwähnten Sonderfächer der Medizin zum größten Teil schon hier erscheinen.<sup>1</sup>

Junker extended his examination of medical titles beyond the scope of those included in the stela of 'Iry and noted the existence of some specifically dental titles:  $\text{𓂏}$ , which he read *ibhy*, 'he who is concerned with teeth' i.e. 'dentist';  $\text{𓂏}$ , *irw ibh*, 'he who deals with teeth' i.e. 'dentist' also; and the senior titles *wr ibhy* and *wr irw ibh*, 'chief dentist', and *wr ibhy pr-c*, 'chief dentist of the Great House'.<sup>2</sup> He also noted that the title *wr ibhy* occurs with *sinw* among the titles of Hesy-Rē, a Third-dynasty official whose mastaba at Saqqāra has yielded finely carved wooden panels. The collocation of titles *wr ibhy sinw* found on one panel is used to introduce this paper and it may be seen in its full context on pl. X, 1. In dental literature it has become common to regard Hesy-Rē as the first recorded dentist. B. W. Weinberger, an American dental historian, quotes a letter of Hermann Ranke, written in 1942, in support of this claim.<sup>3</sup>

Philological evidence alone, however, cannot establish the existence of a true dental profession in ancient Egypt, and it was Junker again who provided the one piece of supporting evidence of the practice of prosthetic dentistry in existence. During his examination of shaft 984 at Giza, a number of articles were found, all of them being, he believed, of the late Fourth or Fifth Dynasty. Among the remains of a body were two teeth, a lower second and a lower third molar joined together by a piece of gold wire woven around the gingival margins. Professor Euler, who made an examination of this most important find, was of the opinion that judging by their colour and anatomical form both teeth belonged to the same individual (pl. X, 2). The crown of the third molar showed extreme wear of the occlusal surface and its roots were almost completely absorbed. Also, and this is almost the most vital part of the evidence, he contended that tartar was found on both the gold wire and the tooth, indicating that the dental work was performed in the mouth of a living person.<sup>4</sup>

It has been possible to examine this vital evidence only from a photograph and it is certainly impossible to verify that tartar was indeed present. In fact its presence could only be accepted if a piece underwent microscopical examination, since concretions of extraneous and contiguous matter form on teeth and skulls that have been buried

<sup>1</sup> Ibid. 69.

<sup>2</sup> Ibid. 69. The dental titles are further discussed in Lefebvre, *Essai sur la médecine égyptienne de l'époque pharaonique* (Paris, 1956), 69.

<sup>3</sup> B. W. Weinberger, *An Introduction to the History of Dentistry* (St. Louis, 1948), vol. I, 67.

<sup>4</sup> Junker, *Giza*, I (Vienna, 1929), 256 f., pl. 40c; the report includes Euler's findings.

for a long period, and these concretions often by their colour and texture resemble salivary calculus. There are other very good reasons for doubting the validity of the conclusions drawn from the evidence of these two joined teeth. In the first place, although Junker states that the teeth were found *im Schutt von den Resten der Leiche*, he makes no mention of the skull or of other teeth. Secondly, the two teeth which would have been close together in the mouth (they are certainly lower second and third molars), are widely separated by the twist of wire. Thirdly, if they are from the same person, it is strange that the third molar (on left) shows much more marked attrition than the second molar (on right); for the second molar by natural process should be several years older than the third molar. A more simple explanation would be that the owner of the teeth preserved them when they fell out and wore them joined together by gold wire around his neck. The first to fall out would have been the second molar, being less worn down; the third molar was lost from the mouth at a much later date when the root became absorbed as the result of an infection. Their presence with the remains of the body, in spite of the absence of the skull and other teeth, is in this way reasonably explained. What should be emphasized is that they do not provide evidence of dental practice.

A further piece of evidence, often quoted in support of the existence of a medical profession in ancient Egypt, is supplied by a Fourth-dynasty mandible found by Reisner at Gîza and described in detail by E. A. Hooton.<sup>1</sup> It shows two circular openings in the region of the apex of a lower right first molar. Breasted states his concurrence with the opinion that these perforations were deliberately drilled to the root of the tooth in order to drain the pus from an abscess.<sup>2</sup> Earlier in this paper is described the pathological sequence of a chronic alveolar abscess in which it was seen that the circular openings through the alveolar plate were caused by the presence of pus associated with an infected apical area (pl. X, 3).<sup>3</sup> It is therefore quite impossible to agree that the holes in this mandible were the result of human intervention and they cannot be accepted as supporting evidence of the existence of an organized dental profession.

To refer once more to the interpretation of the dental titles discussed by Junker, there are a number of authorities on Old Egyptian who accept the suggested renderings. Those whom the author has been able to consult, while accepting the renderings, are unable to agree that there was in fact any practice of dentistry in ancient Egypt as it is known today, since they have been unable to find any corroborative evidence.<sup>4</sup> A very different opinion, however, is held by Dr. Hans Goedicke who is unable to accept that the titles on the Hesy-Rê panel denote an administrative office or are remotely concerned with dentistry, and suggests that they designate a function connected with a ceremonial event or the ritual of a feast.<sup>5</sup>

<sup>1</sup> E. A. Hooton, 'Oral Surgery in Egypt during the Old Kingdom', in *Harvard African Studies*, 1 (1917), 29 ff.

<sup>2</sup> *The Edwin Smith Surgical Papyrus*, 1, 53, pl. 1.

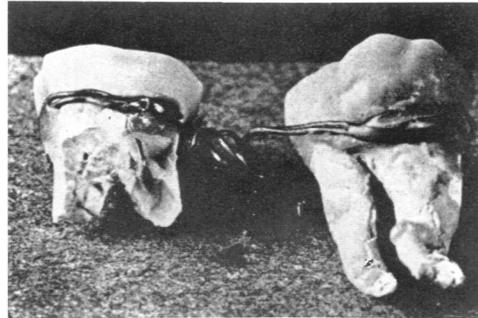
<sup>3</sup> Hooton, *op. cit.* 31, gives reasons for rejecting this explanation for the holes, but his reasons are unfortunately fallacious. The direction of the sinus caused by the exit of the pus is determined by the line of least resistance in the alveolar bone, and all angles are possible, see Leek in Brothwell (ed.), *Diseases in Antiquity* (in press).

<sup>4</sup> So Dr. R. O. Faulkner and Dr. Henry Fischer, in private correspondence, 1966.

<sup>5</sup> In private correspondence, 1966.



1. Panel of Hesy-Ra



2. Two teeth united by gold wire (after Junker, *Giza*, I, pl. 40c)



3. Apex of the central incisor is visible through a circular hole in the alveolar plate, caused by apical sepsis. Extensive absorption of bone in premolar and molar region was the result of infection of the bone. *Tarkhân*

DENTISTRY IN ANCIENT EGYPT

Warren R. Dawson is also of the opinion 'that it is extremely unlikely that there was any distinct profession in Egypt before Ptolemaic times. There were physicians in the Old Kingdom but their methods were more magical than therapeutic'.<sup>1</sup>

Sir Marc Armand Ruffer who devoted many years to the study of the pathological histology of mummies and the skeletal remains of the ancient Egyptians says the following about the practice of dentistry in concluding an essay on the dental pathology seen in skulls:

The writer's studies have not revealed any facts showing that the Egyptians practised operative dentistry, in fact, the evidence rather points to the conclusion that even extraction was very seldom performed. It is not rare to find in Egyptian cemeteries diseased teeth almost dropping out of abscess cavities, or carious teeth which have caused extensive disease, and yet the patient was allowed to die without the relief that would have been afforded by a very simple operation. It is difficult to believe that extractions were not practised at times, but the evidence on that point is nil. No tooth filled with gold or any other metal has been found.<sup>2</sup>

From the foregoing it will be realized that there are large gaps in our knowledge of this subject. The only acceptable evidence is that revealed in the skulls themselves. A number of diligent studies of some of the available material have already been made, but it will be only by the careful examination and the recording of every dental detail to be seen in each ancient Egyptian skull that light may eventually be shed on the dawn of dentistry.

The author has examined over 3,000 skulls, and although statistically this is an insignificant number, in not one skull was there a sign of active human interference with the course of any dental disease.

The surviving medical papyri do little to solve the problem and it is unlikely that any document more specific than the Edwin Smith Papyrus will be found. It is fortunate that the hard bony structures of the skull and the enamel of the teeth, like pottery and sherds, have, under good conditions, an almost indefinite existence. The hard dental tissues for ever bear testimony of the type of food eaten, of any operative care taken of them, and of the results of any disease that had affected them. As the photographs of the ancient Egyptian skulls here illustrated show, this testimony is very real and unalterable except where there has been post-burial damage.

While collections of skulls, be they large or small, can only represent a minute proportion of the population, they nevertheless exhibit a cross-section of the people. They have all been removed from their graves without any thought of subsequent study in connexion with dental problems. Many will have belonged to members of the poorer classes who would probably have received no dental attention in any case, but others will be of members of the wealthier classes who would certainly have received treatment if it had been available.

Although Junker found two teeth joined together with gold wire, the evidence this provides is of very doubtful value, and even if accepted, is more than counterbalanced

<sup>1</sup> In a letter, 1966.

<sup>2</sup> See Sir M. Armand Ruffer, *Studies in the Palaeopathology of Egypt* (Chicago, 1921), 314.

by the fact that it is unique as an example of dental craftsmanship in over 3,000 years. During this time it was the custom to bury with the dead a variety of articles to be used in the after-life, and one can be confident in the supposition that any form of dental restoration would have been left *in situ* for use during life in the after-world.<sup>1</sup>

If anyone received expert dental care, surely it would be a Pharaoh. Such is not the case; not in one royal mummy is there any evidence of dental interference to be seen, in spite of, in some cases, its very obvious need.

In conclusion, while it must be acknowledged in view of the frequent ante-mortem loss of teeth that a method of extraction other than that achieved (under the right conditions) by simple digital pressure may have been known, there is no acceptable evidence to prove that any human interference took place on the tooth structure for relief of pain. The only active remedies that could have been used were applied to the surrounding soft tissues, and such remedies never retard the progress of dental disease.<sup>2</sup>

<sup>1</sup> See A. W. Lufkin, *A History of Dentistry* (London, 1949), 314.

<sup>2</sup> The observations which led to the writing of this paper were made while conducting anthropological investigations in Cairo, Cambridge, and London. The author is most happy to acknowledge the interest and help given in its preparation by Warren R. Dawson and T. G. H. James. Some of the relevant data were published in *JEA* 52, 59-64. The material presented on pls. VIII-X, apart from the panel of Ḥesy-Rē and the two teeth from Giza, is part of the Karl Pearson Collection of skulls preserved in the Museum of Archaeology and Ethnography, Cambridge.