The Ancient Egyptian Surgical Instruments
By
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Ancient Egyptian medical Papyri mentioned many surgical instruments e.g. in Ebers pap.(5,767) it mentioned the instrument "Khpt" to be used for otorrhea, also in (5, 875) it mentioned the "ds", "hnwh", "shas" as sharp instruments for removing tumours. However, no diagrams or drawings for these instruments were found. Many surgical instruments were found in towbs, and there is also the famous relief on the walls of Kow-Ombo temple depicting surgical tools.

(1)

However, the words written by Y.H. Breasted in his remarkable treatise "The Edwin Smith surgical Papyrus" pushed me to study, and draw the surgical instruments in the Cairo museum. Here, I quote what he wrote on P. 53, "but no thorough and exhaustive examination of all such surviving emplements by a surgeon or an archeologist familiar with ancient surgical appliances


(2) This study took four years, it also included comparisons with surgical instruments of the "Alexandrian Period" and other surgical instruments from the Roman empire, Pompeiwnets. by. Kh. Messiha.
has ever been made. We are still awaiting a final monograph on this subject."

We cannot pass by without giving a word about the famous Kom-Ombo surgical tools. The engraving shows: The top row contains two horns (for enema)

(3)
A collection of needles? a probe, cautery, saw, cauteries. In the second row, there is a mortar with its pestle, tweezers, pincers, probes, sponges. In the third row there is a balance, two amulets (eyes of Horus), pincers. In the fourth row there are scalpels, spoons, spring scissors, cupping glasses etc.

On close study of the surgical tools in the Cairo museum one can divide them into separate categories. Please refer to the diagrams at the end of this monograph), these are:

(4)
1- Cutting tools: Flint Knives * used in circumcision, and in mummi fication). Bronze and copper scalpels which look like modern tools, also lancets and guarded knives for throat surgery?.

2- Cauterities: Made of bronze and copper, having different shapes and size for different uses e.g. stopping hemorrhages and cauterizing tumours. There were the stout, with a rounded and, the myrtle leaf shaped..etc.

(3) mohye-Eladin Abdul-Latif "Kom-Ombo temple" the general Egyptian house for editing and publication. 1970 also, Paul ghalioungui " Magic and medical science in Ancient Egypt". plate XIII. published by Hodder and stoughton. London 1963. E.C.4

(4) Tomb of "Ankh-ma-hor", saqqara, from the V Dynasty.
3- **Forceps and tweezers:** Made of bronze, they are of different size and shapes, but mostly with flattened ends. There is one stout specimen with strong grip to remove arrow heads from wounds, also broken pieces of bone. Small "Tweezere" were used to remove foreign bodies from the external ear, for extracting spikes of plants or wood. There is one very remarkable too thed forceps provided with a ring-lock to assure the non slipping of the soft tissues it is made of brass and looks very modern.

4- **Spoons and spatulas:** used to hold powdered medicaments to be introduced in the wounds or to be applied to the tonsils and the throat. Some are flattened and elongated, or leaf like, rounded, shallow or deep, made of bronze or copper.

5- **Tongue depressors:** of copper or bone, to depress the tongue while applying medicaments to the tonsils, throat or teeth.

6- **Needles and pointed tools:** Suturing the wounds is mentioned in the medical Papyri, also one can see the suturing of the abdominal incisions in the mummies, Long rounded needles were used, the writer have noted needles with triangular section, were they skin-cutting needles like those we are using in modern surgery? or for bleeding purposes?.
After a careful study of the sharply pointed tools and comparing them with the early historical acupuncture Chinese tools (needles), I consider them as the earliest types of "Acupuncture pharaonic needles". One very fine example, is that of 8 eye less long rounded needles sharply pointed in the relics of Hem-Ka (Cairo museum). They were made of copper, about 20 cms long, with a diameter of about 3 millimeters. There are also gold needles, they were used also in tootooing. Other sharply pointed tools or "Piercers" were made of different materials like bone, wood, copper, bronze. They had different uses for acupuncture, for boils ....etc.

7- Dilators and probes with rounded ends, long probes for compound fractures (to probe for broken pieces of bone) and for external urinary tract also to probe chronic wounds for pus........etc.

8- Levers: There are short and stout for depressed fractures of the skull, which was very common in ancient wars, also long with Falttened end ......etc.

(5) See Fu wei-Kang The story of chinese acupuncture and moxibustion. Printed in China. 1975. on page 11, "In 1968 at Hsiling mountain in Mencheng county Hopei province, was excavated the western Han Dyn. towb of liu sheng (Prince ching of chung han) and his wife dating from the second century B.C. among the finds are nine needles, four of gold, five of silver".
9- **Curettes**

10- **Saws:** to saw bones, there is one depicted in the Kom-Ombo

11- **Scissors:** Most of them are spring-scissors, their handles had no eyes. In the Cairo museum there is a fine small surgical scissors with straight long handles, fixed with anail and sharply pointed.

12- **Razors:** Until now razors are used in common daily life, and in surgery to shave around scalp wounds or clean other areas from hair.

13- **Trephine instruments:** until now there is a heated discussion about trephine openatin in ancient Egyptian surgery. The writer suggests that certain stout instruments, the so-called "Piercers" Rad a role in this operation. Dr. Hoorst Reiter, the Chief of the Anthropology Depar. of Goettingen Univ. west Germany, announced that after studying the Shull of an Egyptian mummy, he had discovered that it was trephined to remove a brain tumour. The healed wound gave evidence that the patient survived and lived for several years after wards. He sent a scientific report of his discovery to the "Egyptian Academy of Scientific research. "Various authors published photographs of trephined skull of ancient Egyptian origin. A complete set of trephine instruments were found in the tomb of a Roman physican.

14- **Swabs:** Made of Short reeds, with linen finely wrapped on one end.
Supports for fractures were made of wood, or cartonnage (cloth impregnated with glue are the dough of bean flour and honey, or barley flour and glue and honey).

Later on, all the ancient instruments were used during the Alexandrian period. Still Later On. This was taken over by Greek physician, Roman, Pompeian and Arab physicians like Abulkasis, Avicenna, Rhazes. Most of these famous Arab physicians gave the name, the shape, and the use of each surgical instrument. Abulkasis, the "Andalusian" physician gave the description and diagrams of about four hundred surgical instruments, it seems that he had designed some of them. It is also noteworthy to say that mummification processes in ancient Egypt required special tools like the ritual knives...etc part or all of these tools might have been used in surgery. The ancient wars gave the Egyptian surgeon to deal with all types of traumas and pushed him to invent new instruments or to develop the older ones to give better results.

Khalil MESSINA
لقد جاء ذكر اسم آلآت الجراحة في البريدات الطبية المصرية، وقد وجد الكثير منها في المانحين والبصريين، وما كتبه برستيد في مقاله "بردية أدبي آلآت الجراحة"، "راعو" الجمعية "ToUpper" لدراسة آلآت الجراحة الموجودة بالبصري واستعراضها، ونظيرها نحو أربع سنوات، وذكر كل كم آلآت الجراحة المنتقاة على جدران معبد كوم امبو وهي مرتبة في أربع صفوف متتالية ونرى فيها آلآت الكتال ومنشار ومداخل ومجسات وميزان ومقص زيتي 50 الخ، أما آلآت الجراحة الموجودة بالبصري فقد قسمتها إلى مجموعات

وفي نهاية البحث رسمت تطبيقات لبعضها:

1- آلآت قاطعة من الفون (استخدمت في عمليات الطهارة والتجهيز) ومشارب من البرونز 

2- مكاوي ذات أشكال مختلفة من البرونز لكي الورق والأياف النازف 

3- ملاعق مختلفة الاحجام منها الدقيقة الحجم لأخراج الكلاب والكبير الحجم لإخراج رؤوس السهم وغيرها، ومنها ملقطة محبس وطرق كبيرة من أحكام 

القيمة على الأنسجة المخولة أثناء العملية 

4- ملاعق وملاعق لتناول المساحيق الطبية ووضعها على اللوزتين واللتهجنة 

5- الأعراض داخل الجروح العميقة وهي من البرونز 

6- خاص اللسان من العظم والبيروفاخ لخفض اللسان أثناء وضع المساحيق 

6- الرطبة داخل الفم 

7- اللبان والآلات المسنة: مصنوعة علها من البرونز والقلي من العظم والخشب، وقد تبين لي بعد البحث والمقارنة أن منها "بر وخذ فرعونية" مثل البار الصينية واستخدمت في العلاج بالوخز وفي الوشم منها مـ.
الذهب دقيق الصنع وهناك إبر لخياطة الجروح وقد ذكر هذا في...

البرونزات الطبية

- موسات ومجمس للمسالك البولية والجروح والنواصر
- رواج شبه مختلف الجرح لتقسيم كسور الجمجمة (الخسف) وغيرها
- مغادر لجرد العظام وتنظيفها من الصدأ والأورام
- من البرونز
- منازيل من البرونز
- مقاطع زنبركية، ومنشر متغيرة دقيق الطريقي نرفاع مستقيم ومحمور

اموس حلاقة جادة من البرونز لازالة الشعر حول الجروح (ففضل عن استخدامها في الحلاقة)

13 آلات التربين: لقد وجدت عدة جمجم بها ثقوب ملثمة دليلاً على
أصحابها عاشوا بعد عمليات التربين، وهو اسم رئيس من جامعة جونججـ (العربية الغربية) اكتشف جمجمة فرعونية بها تربينة مثبتة، ولكن لم تجـد
بين الآلات المصرية ما يشبه المثابرة الحديثة.

14 جواز خشبة ومن الكتار المشيع بمعاعين تنمل على جفافها
فيارات هي قطع من البوع ملغوف على طرية كتاب اتخذتها محباً للتطهير
الجروح وقد استمر استخدام هذه الآلات بعد انهيار الثورة الفرنسية
ذلك في العصر الكسرشي (أو البسنطي) ثم أخذها الطب البيزنطي
الأقدم والروماني والأوروبي ومنها للطب العربي ومن مشاهير الطب
العرب: سيداو وأبو فخر الرمازي وابن القاسم الزهري القدسي وقد وصفوا
هذه الآلات وطرق استخدامها في الجراحة وزادوا عليها.

خليل مسيحة جرجس

1986
A sharp rounded piercer made of wood, most probably an acupuncture instrument.

A sharp piercer made of bone, most probably for acupuncture.
25441
Stout Forceps

29062
Forceps with flattened slanting tips

60445
Tweezers

23 + 11
Forceps with broad elongated flat ends.

From Cairo museum
Long needles (rounded)
Cairo museum.
Ancient Egyptian Surgical Instruments

4. A scalpel

5. A knife

A. Ophthalmological

2. A trephine?
A quarded scalpel

Ancient Egyptian surgical scalpels

Two bronze T-shaped incision knives

Flint knife for circumcision and mumification