

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 otorrhoea, 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 tombs, 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. (2)
Here, I quote what he wrote on P. 53, "but no thorough and exhaustive examination of all such surviving implements by a surgeon or an archeologist familiar with ancient surgical appliances

(1) Y.H. Breasted, "The Edwin Smith Surgical Papyrus" published by the univ. of Chicago, Oriental Institute publications-Chicago, Illinois. 1930.

(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, Pompeii. 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, spones. 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 mummification). Bronze and copper scalpels which look like modern tools, also lancets and guarded knives for throat surgery?.
- 2- Cauteries: 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 end, the myrtle leaf shaped..etc.

(3) mohye-Eldin 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, throap 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 (5) 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 capper, about 20 cms long, with a diameter of about 3 millimeters. There are also gold needles, they were used also in totoeing. Other sharply pointed tools or "Piercers" were made of different materials like bone, wood, copper, bronze. They had different uses for acupuncture, for boilsetc.

- 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 endetc.

(5) See Fu wei-Kang The story of chinese acupancture and moxibustion. Printed in China. 1975. on page II,"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. Hoerst Reiter, the Cheif of the Anthropology Depar. of Goettingen Univ. west Germany, announced that after studying the Shull of an Egyjptian 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 sentaa 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.

- 15- Supports for fractures were made of wood, or cartonnage (Cloth impregnated with glue are the dough of bean flour and roney, 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 discription and diagrams of about four hundred surgical instruments, it seems that he had designed some of them. It is also note worthy 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 MESSIHA

" آلات الجراحة المصرية القديمة "

لقد جاء ذكر اسماء آلات الجراحة فى البرديات الطبية المصرية • وقد وجد الكثير منها فى المقابر الفرعونية • وما كتبه برستيد فى مؤلفه " بردية ادويسن سميت الجراحية " اعتبرته دعوة خاصة بى لدراسة آلات الجراحة الموجودة بالمتحف المصرى واستغرقت دراستها نحو اربع سنوات • وسنذكر كلمة عن آلات الجراحة المنقوشة على جدران معبد كوم امبو وهى مرتبة فى أربع صفوف متتالية ونرى فيها آلات الكى ومنشار وملاق ومجسات وميزان ومقص زنبركى • الخ •

أما آلات الجراحة الموجودة بالمتحف المصرى فقد قسمتها الى مجموعات وفى نهاية البحث رسوم تخطيطية لبعضها :-

- ١- آلات قاطعة من الصوان (استخدمت فى عمليات الطهارة والتحنيط) ومشارط من البرونز •
- ٢- مكاوى ذات اشكال مختلفة من البرونز لكى الاورام وايقاف النزف •
- ٣- ملاقط مختلفة الاحجام منها الدقيق الحجم لاجراج الاشواك والكبير الحجم لاجراج رؤوس السهام وغيرها • ومنها ملقط له محبس وطرفه مسنن لاحكام القبضة على الانسجة الرخوة اثناء العمل •
- ٤- ملاعق وملاق لتناول المساحيق الطبية ووضعها على اللوزتين واللهاية والاضراس وداخل الجروح العميقة وهى من البرونز •
- ٥- خافض اللسان من العظم او البرونز لخفض اللسان اثناء وضع المساحيق الطبية داخل الفم •
- ٦- الابر والآلات المسننة : مصنوعة اغلبها من البرونز والقليل من العظام والخشب وقد تبين لى بعد البحث والمقارنة أن منها " ابر وخز فرعونية " مثل الابر المسينية واستخدمت فى العلاج بالوخز وفى الوشم ومنها من

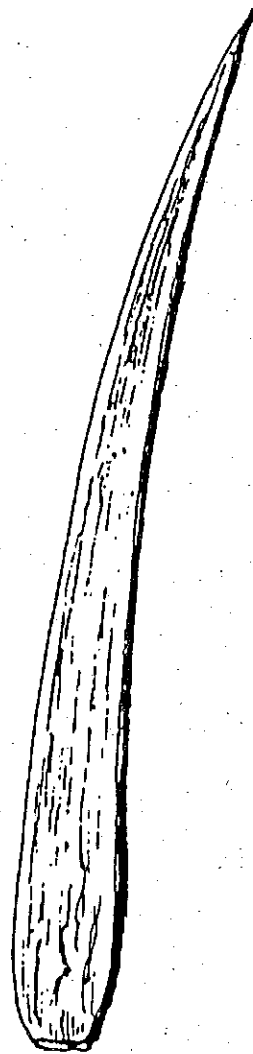
الذهب دقيق الصنع وهناك ابر لخياطة الجروح وقد ذكر هذا فى
البرديات الطبية

- ٧- موسعات ومجسات للمسالك البولية والجروح والنواصير •
 - ٨- روافع متينة مختلفة الاحجام لتقويم كسور الجمجمة (الخسف) وغيرها •
 - ٩- مجارد لجرد العظام وتنظيفها من الصديد والاورام ، من البرونز •
 - ١٠- مناشير من البرونز •
 - ١١- مقصات زنبركية ، ومنها مقص صغير دقيق الطرفين وله ذراعان مستقيمان ومحور •
 - ١٢- امواس حلقة حادة من البرونز لازالة الشعر حول الجروح (فضلا عن استخدامها
فى الحلقة) •
 - ١٣ آلات التربة : لقد وجدت عدة جماجم بها ثقوب ملتئمة دليلا على
اصحابها عاشوا بعد عمليات التربة • وهيو سمث ريتير من جامعة جوتنجن
(المانيا الغربية) اكتشف جمجمة فرعونية بها تربة ملتئمة ، ولكن لم نجد
بين الآلات المصرية ما يشبه المثاقب الحديثة •
 - ١٤- جبائر خشبية ومن الكتان المشع بمعاجين تتصلب عند جفافها •
 - ١٥- غيارات هى قطع من البوص ملفوف على طرفها كتان لفا محكما لتطهير
الجروح وقد استمر استخدام هذه الآلات بعد انتهاء عصر الاسرات الفرعونية
ذلك فى العصر السكندرى (او البيزنطى) • ثم أخذها الطب اليونانى
القديم والرومانى والاوروبى ومنها للطب العربى • ومن مشاهير اطباء
العرب ابن سينا وأبو فخر الرازى وأبو القاسم الزهراوى الاندلسى وقد وصفوا
هذه الآلات وطرق استخدامها فى الجراحة وزادوا عليها •
- خليل مسيحة جرجس

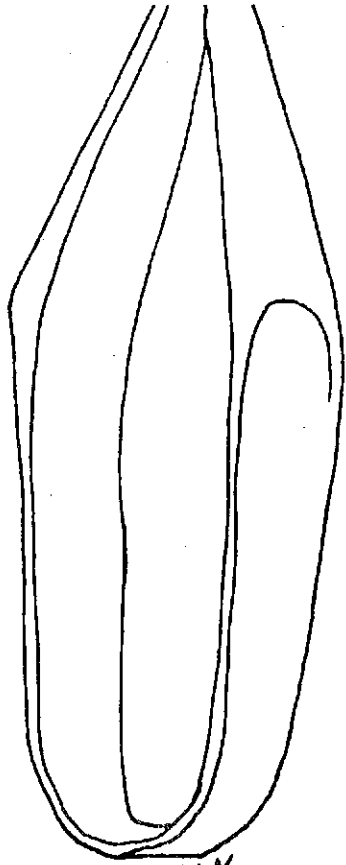


M. Hesika

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

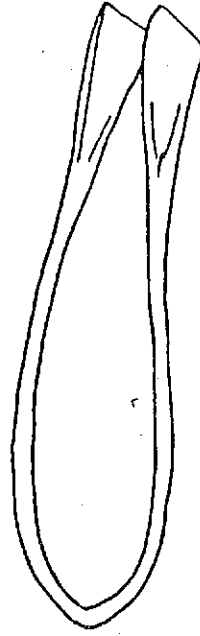


A sharp
piercer
made of
bone, most
probably for
acupuncture



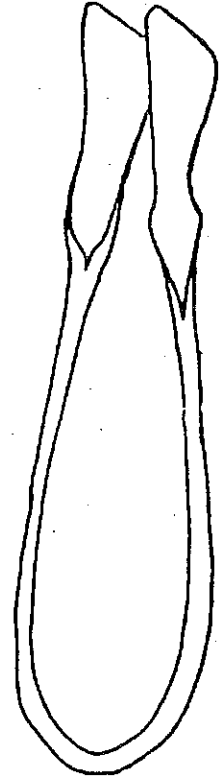
K.H.
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Stout forceps



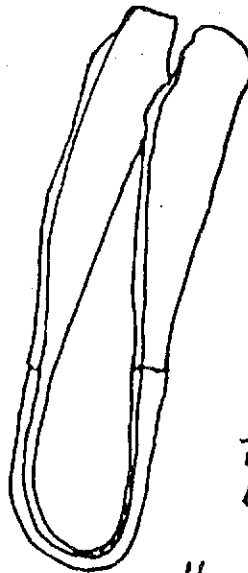
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Forceps with flattened
slanting tips



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Tweezers

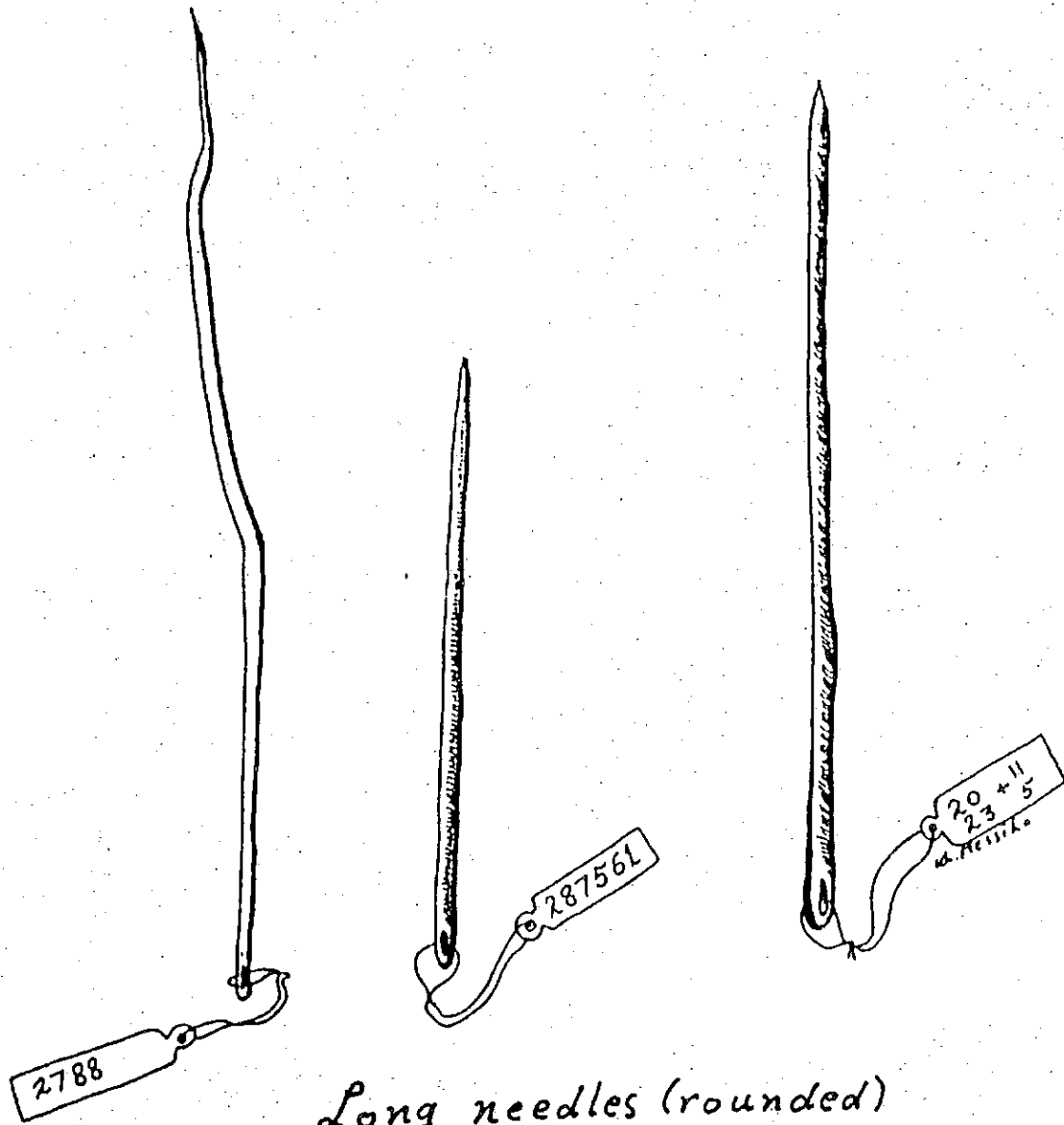


Forceps with
broad elongated
flat ends.

23 + 11
8

From Cairo museum

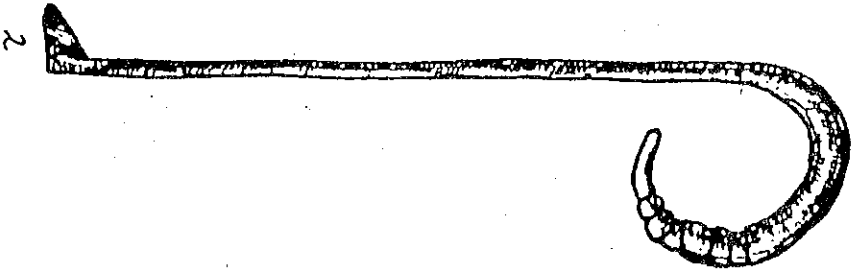
Dr. K. Messika



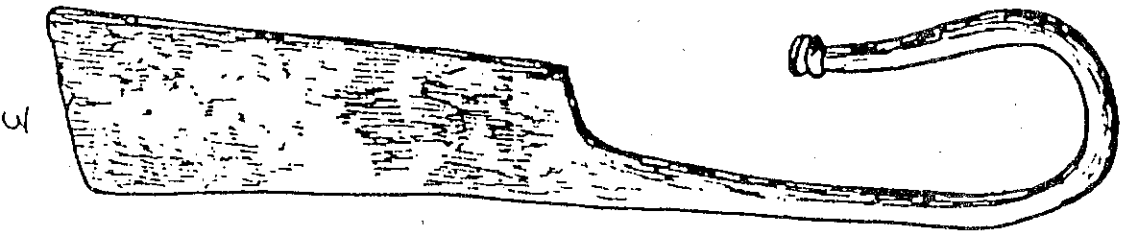
Long needles (rounded)
Cairo museum.



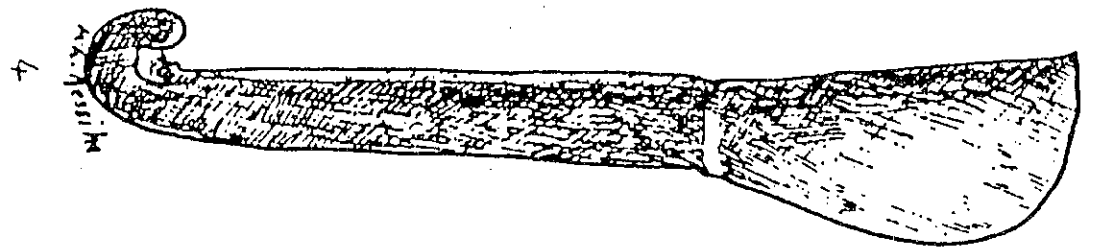
A trephine?



ophthalmological
scalpel



A knife

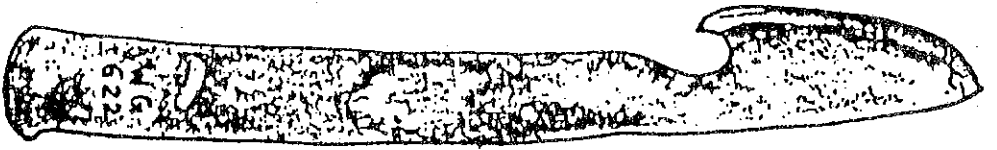


A scalpel

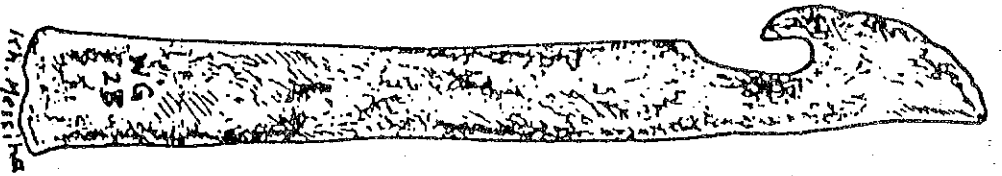
Ancient EGYPTIAN surgical instruments



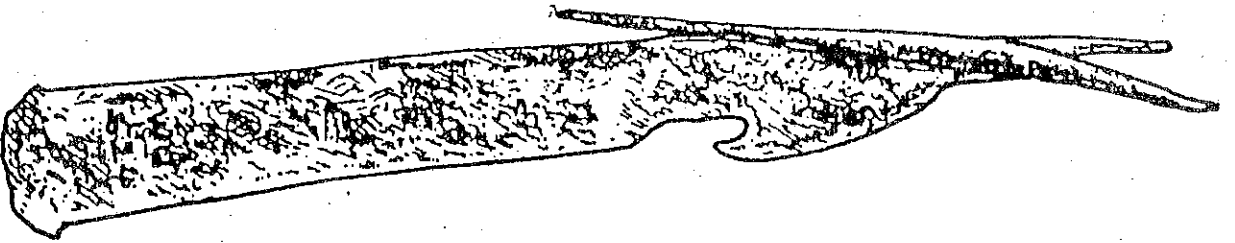
Flint knife for
circumcision and
mummification



Two bronze
scalpels



Ancient Egyptian surgical
instruments



a guarded
scalpel