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Evolution of Surgery and Surgical Instruments in Science

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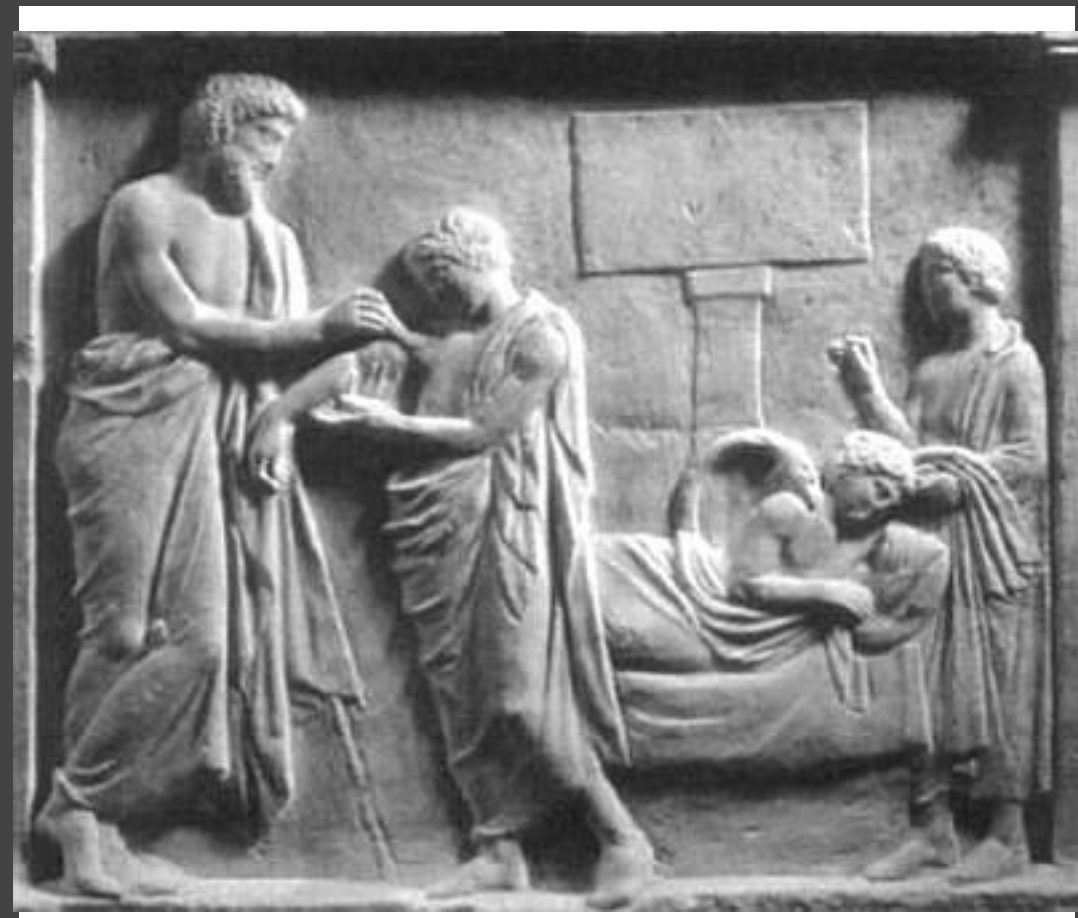


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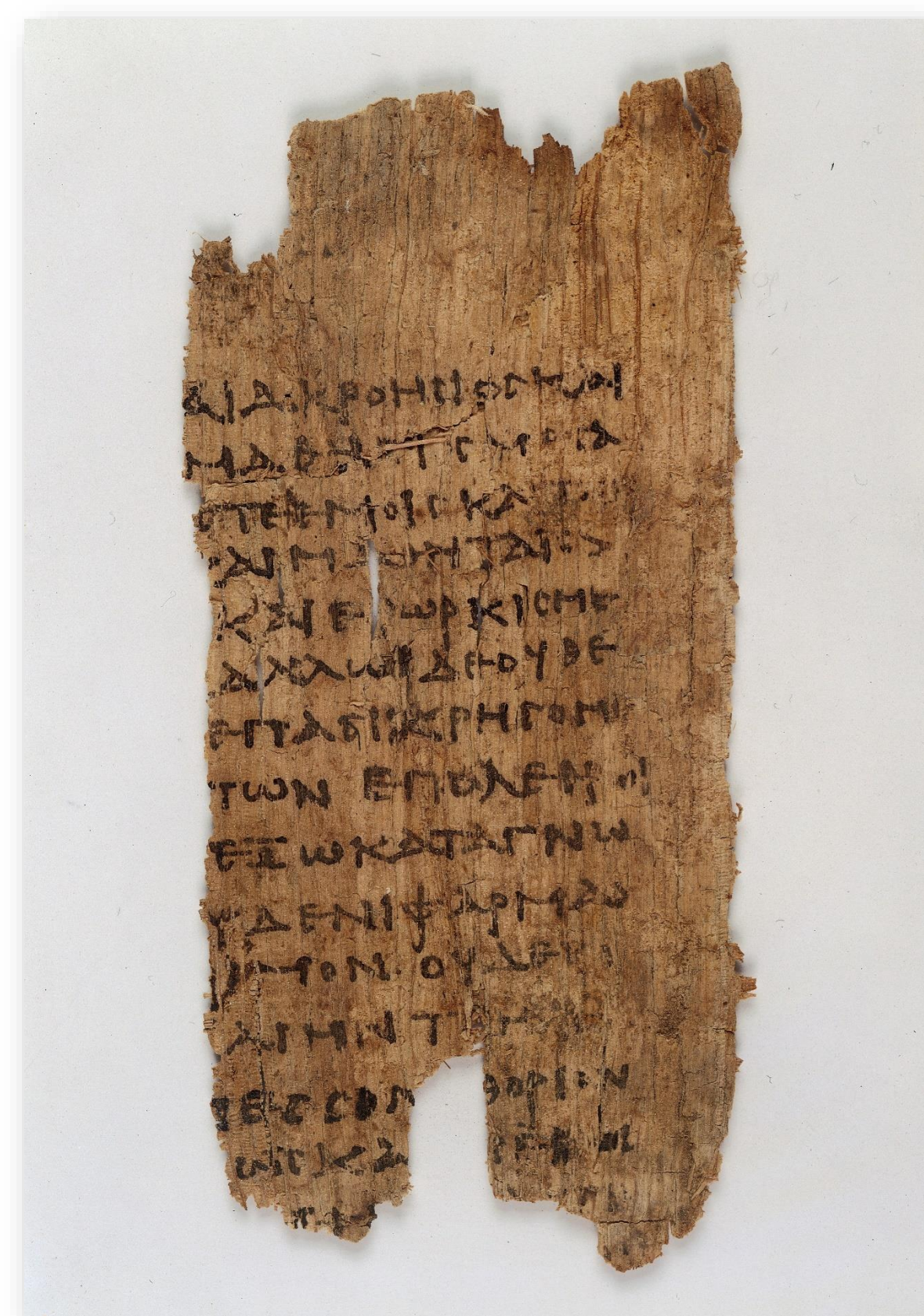


Evolution of Surgery and Surgical Instruments in Science (Ancient Greece to Rome)

Shelbi Royster

Origin of Medicine in Greece

The professionalism of the medical field developed in ancient Greece through the Hippocratic Corpus. This is one of first Greek writings on medical practices and the tools associated with different medical practices as well. Although medicine and its practices were defined from different writers, the medical field was not a popular profession to enter in the Greek world. Educational occupations such as philosophy were more sought after, especially with superstitions of the Greeks.



FRAGMENT OF HIPPOCRATIC CORPUS

Superstitions and Limitations

The process of surgery and its techniques were limited for a long time due to the superstitious nature of the Greeks and Romans. Dissection was an integral part of medicine that allowed experimentation of invasive techniques, so a patient who was alive would not be harmed in any way. Dissection also helped doctors better understand the body with both external and internal injuries. For a short time in Hellenistic Alexandria, dissection would be allowed and practiced "normally but becomes illegal just as quickly."

Hippocratic Corpus (430 to 330 B.C)

In the Corpus, surgery was only to be a last resort. The treatise, *On Surgery* outlines the process to which the surgeon should conduct surgeries with light, positions, and respecting every aspect of the body (Part III). The treatise stresses the importance of cleaning the surgical areas, tools, and bandages. In the treatises *On Dislocations* and *On Fractures*, setting bones and fractures and removing bone fragments were important to the field of orthopedics, being very similar to modern techniques. Bloodletting is also an important surgical technique mentioned in the *Regime*.

BONE FORCEPS FOR REMOVING BONE FRAGMENTS



JAW RESETTING



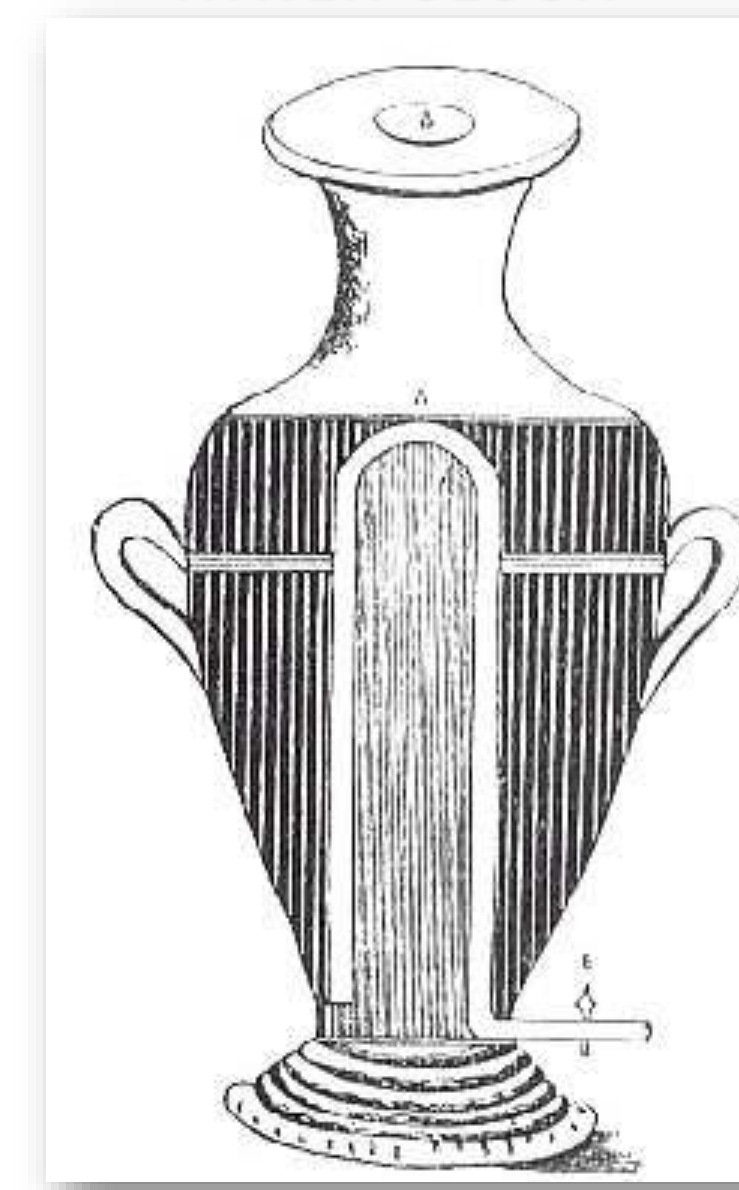
BLOODLETTING CUPPING VESSELS

Hellenistic Alexandria (323-31 B.C.)

With a short time of legality of dissection, great advancements in medicine occurred. Herophilus (c. 325-255 B.C.) and Erasistratus (c. 304-250) were pioneers in the field of anatomy and dissection. The methodology of measuring heart rates and the pulse were used with water clocks. Apollonius of Citium (fl. c. 60 B.C.) simplified methods in repairing joints and other physical injuries for his illustrated treatise, *On Joints*, helping both surgeons and nonphysicians understand physical injuries.



WATER CLOCK



Medicine in Rome

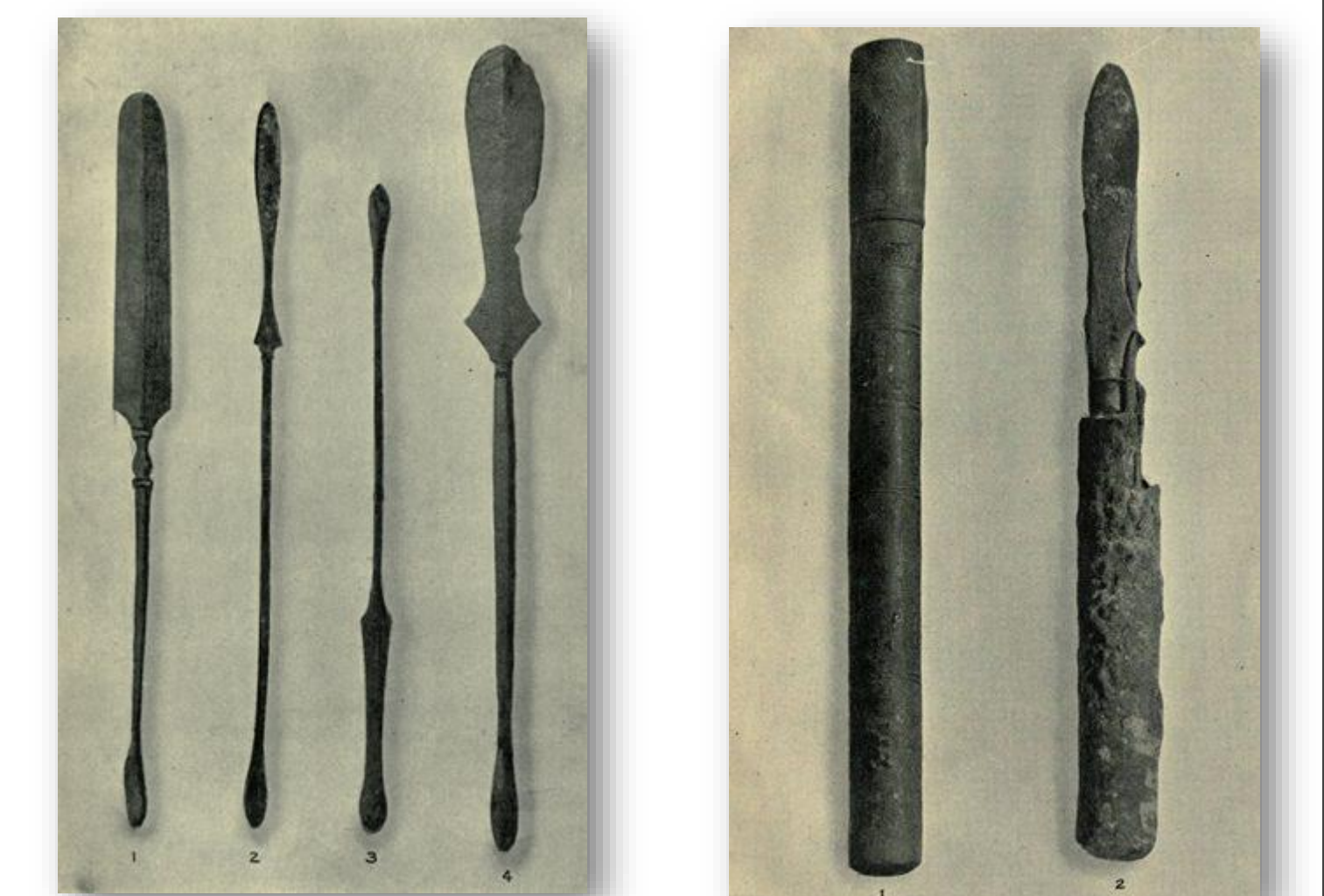
The emergence of medical writers like Galen (c. 129-200 A.D.) brought new advancements into the medical field. The majority of previous writings were lost, so accounts like Galen's are all that are left. Galen's *Introduction* demonstrates the importance of the Corpus. Other medical writers mention speculums used for the vaginal and rectal areas which are similar to the tools used today. Bone levers are also mentioned and were typically for teeth or minor bone damages. Probes were important guides during surgery and treating wounds. In general, most tools were made from a form of metal or wood and did not evolve too differently from Greece to Rome.

VAGINAL SPECULUM



BONE LEVERS

PROBES AND THEIR CASES



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