

Surgical instruments

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Surgery has been performed since ancient times. The earliest recorded surgical operations were circumcision and trepanation. (Circumcision is the removal of the foreskin of the penis. Trepanation involves making a hole in the skull to relieve pressure and/or release spirits.) The earliest instruments used in these procedures were flint or obsidian (shiny stone) knives and saws. Stone Age skulls from around the world have been found with holes in them from trepanning. Primitive people also used knives to cut off fingers damaged in accidents.

The ancient Hindus of India excelled at surgery. The great surgical textbook, Sushruta Samhita, probably dates back to the last centuries B. C. This work described 20 sharp and 101 blunt surgical instruments. These instruments included forceps, pincers, trocars (sharp-pointed instruments fitted with a small tube), and cauteries (irons to heat and sear tissue). Most of these surgical tools were made of steel. The ancient Hindus also used lancets to carry out cataract surgery, scalpels to restore amputated noses via plastic surgery, and sharp knives to remove bladder stones.

At about the same time, ancient Peruvians were performing trepanation. They left behind various surgical instruments, including scalpels and chisels made of obsidian. The Greeks practiced surgery mostly on external parts of the body. They usually used forceps, knives, and probes. Bronze Roman surgical instruments found at Pompeii include a scalpel with a steel blade, spring and scissor forceps, a sharp hook, and shears. In the first century A. D. , Cel-cus A tray of modern surgical instruments.

The ancient Hindus used lancets to carry out cataract surgery, scalpels to restore amputated noses via plastic surgery, and sharp knives to remove bladder stones. Galen described the use of ligatures. Ligatures are used to tie off blood vessels and reduce bleeding during operations. Galen (A. D. 130-200) gave detailed and sensible instructions on the use of surgical instruments. After ancient times, medical knowledge declined, and surgeons fell to a lowly status. In the absence of knowledge about antiseptics, surgery was highly risky.

As a result, only the simplest and most urgent operations (such as amputations) using the most straightforward instruments were performed. A few physicians sought to spread knowledge of surgical procedures by publishing texts that illustrated surgical instruments. Most important among these men was the great French surgeon Ambroise Pare (1517-1590). Pare revived use of ligature and invented many surgical procedures and instruments. His inventions included the " crow's beak" to hold blood vessels while tying them off.

Pare also perfected an instrument for cataract removal. Other types of surgical instruments are: Payr's Crushing Clamp: This is the heavy instrument with double lever system, it has two blades with uniform serrations, used to perform Gastrectomy. Aneurysm Needle: This is the long instrument with an EYE at one end, it was used to ligate the feeding artery in an aneurysm, during venesection, silk suture can be threaded within eye passed around to ligate it.

Right Angled Forcep: Also known as Lahey's Forcep, it is used to ligate major vascular pedicles like superior thyroid pedicle in thyroidectomy, cystic artery in cholecystectomy and lumbar veins in lumbar sympathectomy. Czerny

Retractor: This is a double hooked retractor on one side and single blade on other side, this is a superficial retractor, used to retract layers of abdominal walls and muscles during appendicectomy, herniorrhaphy, or thyroidectomy.

Lagenback retractor: It has a single blade, function it's similar to Czerny Retractor.

Deaver's Retractor: It is used to retract liver during vagotomy, cholecystectomy, Gastrectomy, also used to retract kidney and urinary bladder. Allis Tissue holding forcep: It has a ratched and triangular expansion at tip, where serrations are present, it is used to hold tough structures like fascia, aponeurosis, can also be used to hold duodenum during Gastrectomy. Throughout time surgical instruments have changed now we sterilize the instruments and they are much more safer than the once in ancient history. Technology has evolved and keeps evolving new instruments will be created always.