

Scissors – the barber surgeon and dissection!

History

Barber surgeons not only cut hair in the middle ages, they were employed to deal with everything that required the use of sharp implement such as bloodletting, amputation, leeching and even pulling teeth. They have been doing this since 1000 AD and more often attended to the less wealthy. The upper classes had physicians who thought it beneath themselves to indulge in such 'dirty practices' although they were more educated in the sciences and arts. The barber surgeons were not accredited by universities and formed into guilds of craftsmen. They became adept at treating all diseases, local infections, dealing with trauma, setting fractures and births; the more skilled indulged in trepanation to release pressure on the brain. The apprenticeship model of training was established.

They were also found in monasteries where they attend to the shaving of the monk's heads and since monasteries become refuges for the ill and thus hospital, the barber surgeon evolved into a clinical and surgical role. Thirteen century France passed a law to forbid physician to practice surgery but the need to provide care in town and villages meant the role of the 'barber surgeon' increased with time. In 1308 the barber attained a guild status and in 1375 this separated into two groups – those who did surgery and those who cut hair.

War and conflict required barber surgeon became more adept at treating trauma. The practice evolved through the practice of humerism; the four domains include 'anguine, choleric, melancholic, and phlegmatic'. They would examine and taste urine, use leeches and bloodletting.

In 1505, the Incorporation of Surgeons and Barbers, became the foundations or what is now know The Royal College of Surgeons of Edinburgh. A Seal of Cause conferred privilege but also mandated a knowledge of anatomy and surgical procedures. In 1743 France under Louis XIV and in 1745 England, the colleges of surgeons were formed and in 1778 King George granted the royal charter.

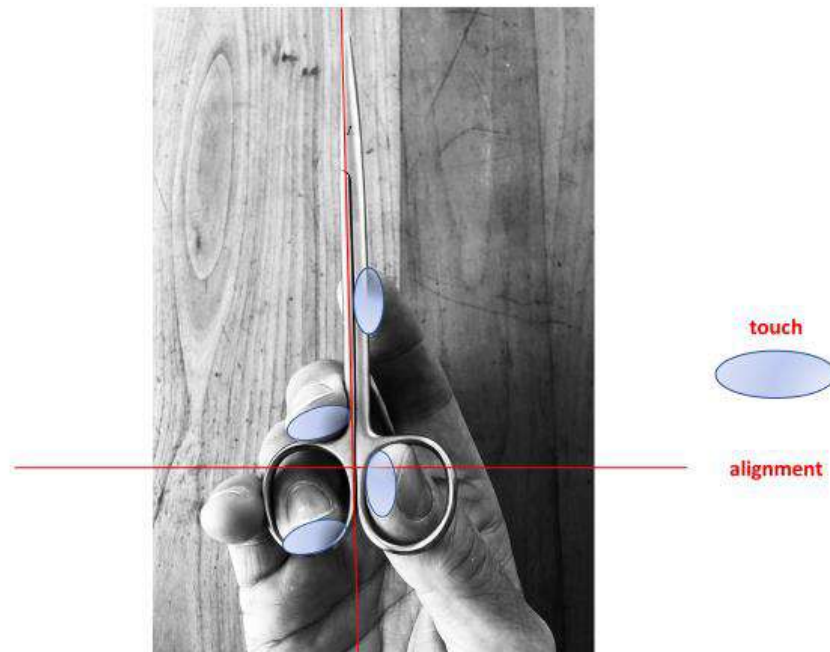
Ancient Egyptians used a version of scissors in 1500 BC – these were a single piece of metal fashioned into two blades connected by another strip that when squeezed, cut. The Romans had another with two blades that were pivoted and passed each other in a cutting action. Robert Hinchliffe, of Sheffield, England, should be rightfully acknowledged as the father of modern scissors. He was the first to use steel to manufacture and mass-produce them in 1761.

Archibald McIndoe was the pioneering plastic surgeon who lends his name to these commonly used dissecting scissors. He was born on 1904 and become a house surgeon at Waikato hospital. Lord Moynihan impressed with his skill suggested to come to England and he worked for his first cousin Sir Harold Gillies and ENT surgeon specialising in plastic surgery. He came ot fame in the second world war as he established the plastic surgical unit at East Grinstead hospital in London. His pioneering techniques of reconstruction restored the burnt faces and hands of Spitfire pilots – his patients established the Guinea Pig club that was disbanded a view years ago as the numbers of veteran survivors fell. The story goes he appointed only good-looking nurses as he wanted to maintain the feleing 'self-worth' of the pilots: many of the nurses married their patient pilots. This is a fantastic example of holistic care.

Handling

The scissors are held with a lightness of touch on pulps of the fingers. Maximising the area of the pulp of the finger in contact with instrument greatly enhances the efficacy of the two mechanoreceptors in the skin that are enriched in the pulp of the fingers. The boundary between the dermis and

epidermis is not regular and is thrown into folds or dermal papillae. The Meissner corpuscles are found at the apex of these folds. They consist of layers of flattened cells with elongated nuclei and surrounded by a coiled neuron that is stimulated to register touch when the corpuscle is deformed. The second touch receptors are the Merkel cells. They are found in the basal part of the epidermis and closely associated with the unmyelinated tip of the nerve. The cells themselves are unencapsulated and have a small receptive field to pinpoint the lightest of touches.

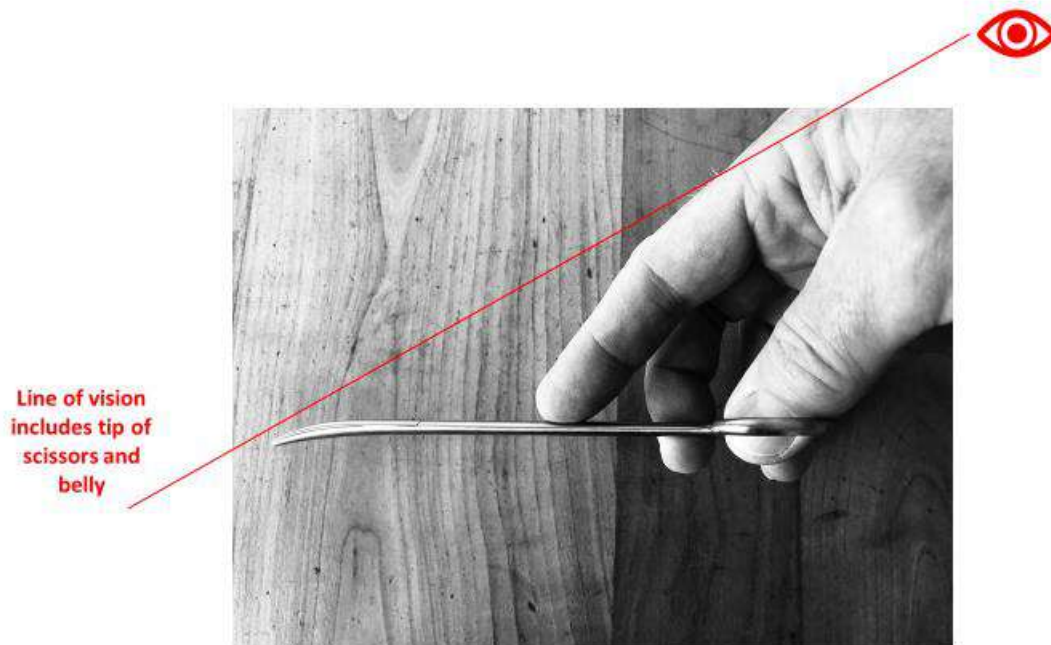


The distal interphalangeal joint should not go through the rings of the as this limits the movements and the ability to put them down or pass them expeditiously.

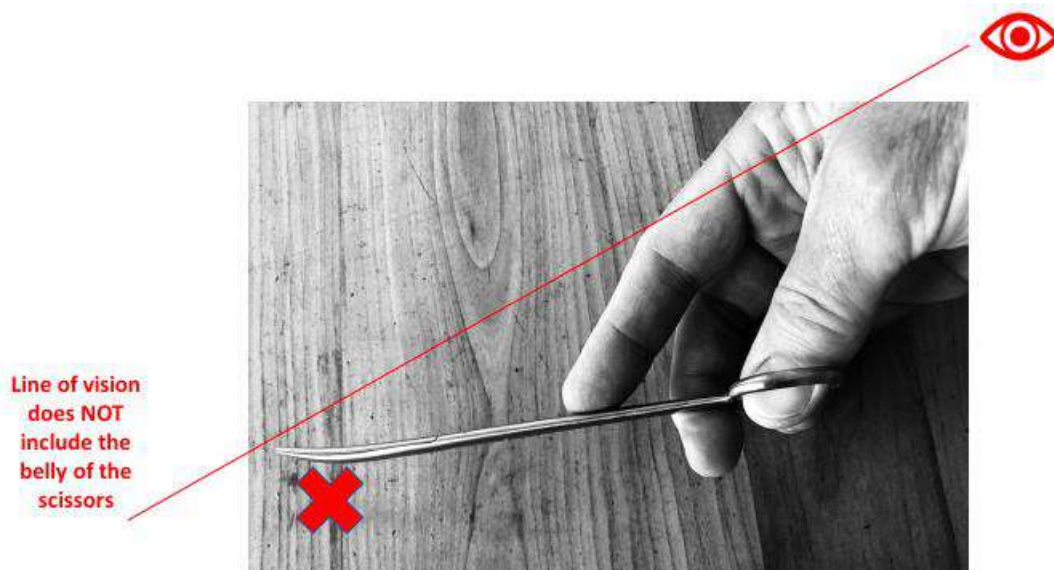


The scissors are opened with the movement of the pulp of the thumb acting with the pulp of the ring finger. They are stabilised with the pulp of the middle finger and 'directed' by the extended index finger.

The scissors are aligned with the curve of the wrist such that your line of vision down the scissors can see the tip and the belly of the scissors.



If the scissors are tuned the other way up, then the belly cannot be seen. The belly of the scissors is remarkably effective at cutting and when dissecting lobes of solid organs, they can damage nearby arteries and veins.



Principles

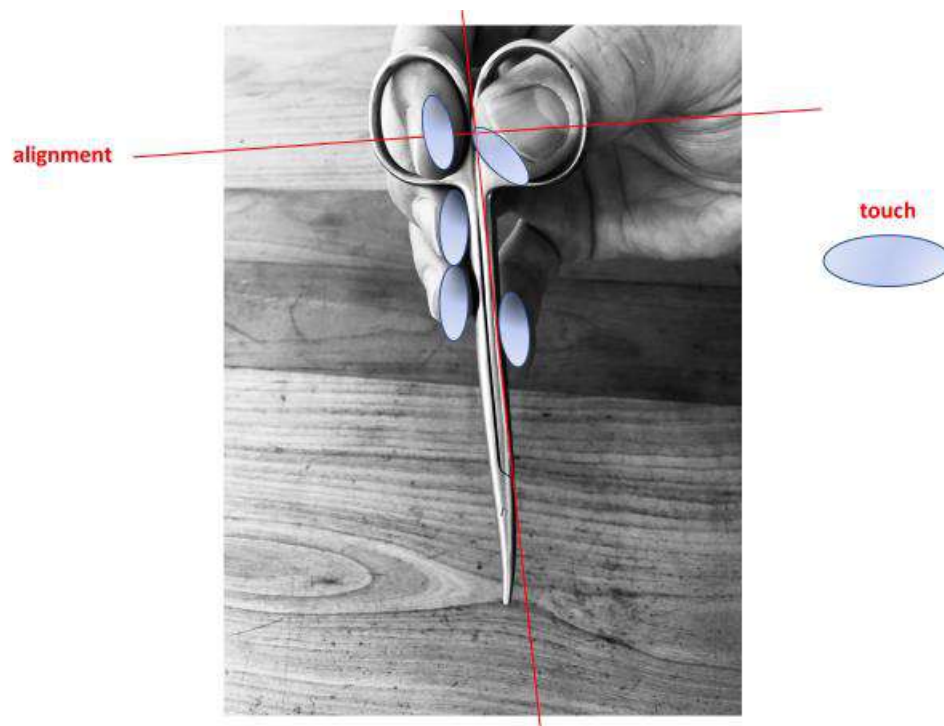
They are principles of dissection with scissors that need to be observed:

1. Never push or stab the scissors into tissue
2. Never open the scissors wide or forcefully.
3. Never close the scissors without seeing the belly or the tip.

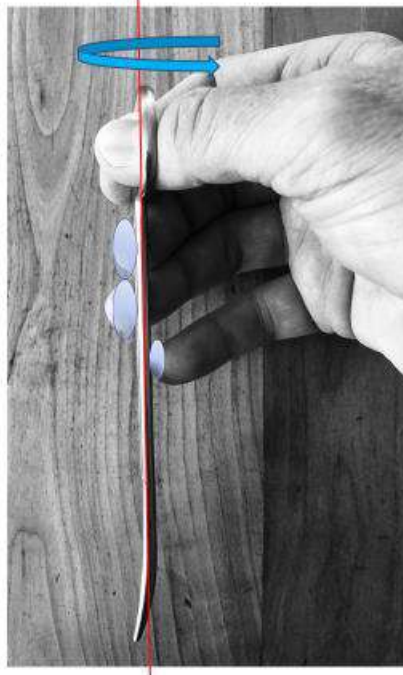
The scissors are best used to 'nibble' at adhesions or to gently develop tissue planes. This is best effected over a broad or wide area of dissection, with traction applied with forceps held by the operating surgeon and / or the assistant.

Inverse handling

In areas of the body where dissection is required at depth, the scissors can be held upside down. Again, only the pulps of the fingers are applied to the scissors with the ring finger and thumb operating the scissors with the ring finger stabilising. The fifth finger is extended down the scissors to direct and stabilise.



The movement of the wrist and arm can 'rotate' the scissors to all areas of dissection at depth whilst enabling the operating surgeon to see the tips and the belly of the scissors.



The scissors should never be opened more than necessary to do the job. The assistant often uses the scissors to cut lengths of suture. This must be done in a controlled manner – align the scissors; open them just enough to cut the suture; close the scissors and withdraw in a controlled manner without any ‘flourish’.



Effective dissection of thin tissue plains, like the those the envelop all our vessels, can be accomplished with the same action as cutting wrapping paper with partially opened tips of the scissors. Likewise, it is in this manner, that the scissors can be used to scrape unwanted material off surfaces.