

museum

Sharing our heritage

Blood letting and the use of leeches in eye disease

- by Dr Jim Martin, Museum Curator

Bleeding of patients as a method of treatment for disease, occurring in any part of the body, was practised from the time of the early Egyptians approximately 1000 B.C.E. This continued through the time of the Greek and Roman physicians and extended until the early part of the 20th Century.

The reason for general blood letting, when 100 to 300 millilitres would be drawn from veins in the arm or other parts of the body, was to rid the body of toxic elements thought to be causing the disease and restore the balance of the four "humours". In the American Encyclopedia of Ophthalmology (1913) the writer quotes a clinician as saying that there was still a place for general bleeding in cases of acute iritis, acute glaucoma, scleritis or threatened panophthalmitis in "robust, full blooded individuals".

Local blood letting for diseases of the eye was performed by the removal of blood from the region of the temple by opening an artery or by applying a leech to an area one half inch lateral to the outer margin of the orbit. The leech is left in place until its gut is fully gorged with blood when it falls off its attachment to the skin. An artificial leech can also be used for this purpose. This consists of a glass cylinder with a suction plunger. This is applied after numerous small incisions are made in the skin or to a trephined area produced by a trephine rotated by a screw mechanism as in the instrument pictured. It used to be said that at least 15 millilitres of blood should be withdrawn to produce any effect on the intraocular circulation.

GOT ANY LEECHES?

A retired Indian Army officer in Melbourne needs leeches to help doctors in their fight to save his sight.

With his sight almost gone, Mr D. M. Paterson, of Fairy Street, Ivanhoe, has spent the past week in the rough country, near Monbulk, with his wife.

They found only seven very small leeches.

"He has nearly lost hope," Mrs Paterson said today. "The seven leeches were hardly any good, and now the doctors say that he must have leeches at least twice a week if they are to save his sight."

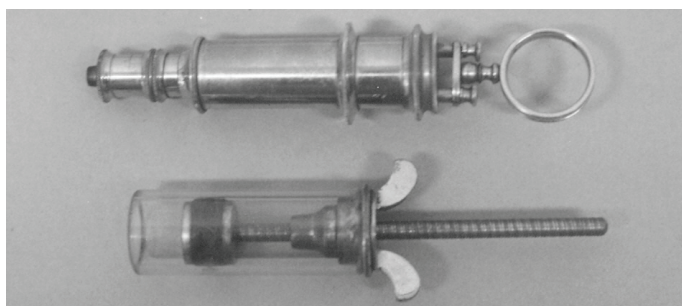
"We have tried all over Melbourne, but even the hospitals can't get them. Can't anyone help us?"

Melbourne eye specialist, Dr. Ringland Anderson, who operated on Mr Paterson, said today: "He needs leeches urgently if his sight is to be saved. Any leeches will do."

This method of treatment was used for the relief of pain and the resolution of inflammation in acute intraocular inflammations. The theory is that the pain is relieved by reducing the pressure on the fine sensory nerves within the eye caused by the dilated inflamed vessels. It has also been postulated that local blood letting could reduce the blood in the ciliary vessels and hence lower intraocular pressure.

Theoretically, this could occur due to the anastomosis between the internal and external carotid arteries systems and between the extraorbital and intraorbital veins but this is difficult to believe. There is not much doubt that the use of leeches produce some beneficial effect and Duke-Elder states that in 1833, 41,500,000 leeches were imported into France. However, the pain of acute ocular inflammation can be relieved, and the resolution of the inflammation can also be promoted, by the use of local heat which is said to produce its effect by producing vasodilation of vessels and this idea runs contrary to the theory of the action of leeches. Leeches certainly must have worked and continued to do so for centuries.

A nurse who worked at the Royal Victorian Eye and Ear hospital has stated that she was applying leeches in 1947 and Dr Hugh Ryan has also said that he was associated with Dr Ringland Anderson in using leeches at that time. The leech was encouraged to bite by applying a drop of milk to the required spot on the skin. Even in 1960 there was a jar of leeches in the pharmacy at Moorfields Eye Hospital. The associated cutting from a Melbourne newspaper also bears witness to the effectiveness of leeches.



Artificial leech. Listed in the catalogue of John Weiss and Son 1898-1916