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 It used to be said that at least 15 millilitres of blood should be withdrawn to produce any effect on the intraocular circulation.

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.

Blood letting and the use of leeches in eye disease
- by Dr Jim Martin, Museum Curator