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History of ophthalmology

The history of artificial eyes

Artificial eyes – not something contemporary ophthalmologists spend much time on – had their origins in Egypt, where mummies of the better class had enamel covered silver eyes, with bronze lids. (The fact that more geriatric mummies had white pupils confirms that cataract was a known entity.)

This doesn't necessarily mean that they were used for the *living* in Egypt, although the Romans certainly used them *in vivo*, and refer to the 'faber ocularius' (maker of artificial eyes) in inscriptions.

The ancient Greeks were also aware of the principle of artificial eyes, embellishing their more important statues with painted silver globes held in place by gold pegs. This meant that invading Spartans were less interested in pillage and violence than in climbing up the statues to steal the eyes. Again, it is uncertain whether they used them for the living.

We know for certain that artificial globes were being worn by 1561. Pare (who was in disgrace for running out of boiling oil as an army surgeon, until he found that it didn't work anyway) mentions artificial eyes, but gives little detail of their manufacture. And in a play written in 1617, a woman who has rejected a one eyed suitor is admonished with the phrase 'what does it matter – he can have a silver one put in!'. The first English 'faber ocularius' set up in Ludgate Hill in 1681, advertising enamel artificial eyes 'so exact as to look natural', which were also 'very ornamental and commodious'.

But around 1917, the burgeoning 'artificial eye' industry suffered a setback, when its product – greatly needed for injured soldiers returning from the war – came under the Defence of the Realm regulations. They were required to send the Director of Optical Munitions and Glassware 'returns of the number and material of all eyes under their control'.

In point of fact, some of these false eyes proved pretty well *un-controllable*, as the partial vacuum

inside the glass sphere made them liable to explode spontaneously, because of changes in temperature. At least four patients suffered this more than once – the effect on their nerves is not recorded!

After the first world war, glass eyes came into more general use. Nettleship reports that children adapted very well to them, flicking them in and out of the empty socket with amazing speed, with disconcerting results in passers by who witnessed the performance.

Although it was clear that suturing a silver ball into the residual cone of muscles allowed the false eye to sit correctly, some surgeons were slow on the uptake. Graves, in his memoirs, laments the case of a patient who chose a more fashionable but less aware surgeon at the last minute. Instead of having the ball implanted and a pleasing result, this lady was left with a sunken prosthesis which looked deformed 'from the other side of the street'. To illustrate how natural her result could have looked, Graves mentions a nurse who completed the whole of her training without anyone suspecting she wore a prosthesis.

However, the strangest use of a glass eye was reported in the *BJO* in 1911, when at the trial of the Camorrist secret society in Italy, the accused wished to interrupt his cross examination. 'Becoming wildly excited, he took out his glass eye and threw it on the floor of the court.' His face, apparently, presented a 'horribly disfigured' appearance, and his questioner duly fainted.

FIONA ROMAN

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