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History of ophthalmology

The fifteenth century ophthalmologist's vade mecum

Benvenutus Grassi was probably born in the eleventh century, and wrote a practical text of ophthalmology which was popular for 500 years. For general surgeons such as Guy de Chauliac, it was the standard ophthalmological vade mecum.

Both copied manuscripts and printed copies survive, including Provençal, French, Hebrew, and English translations from the Latin. The book was modestly priced, and most barber surgeons probably owned a copy. Let us try to get the gist of what we would have learned from it, if we were apprentice ophthalmologists in the 1400s.

'Regarding anatomy, dear reader, the eye consists of two coats, filled with humours which are albuginous (like egg white) – and vitreous (like glass) respectively. The spirit of sight enters through the pupil and flies down the optic nerve.

'You will see much cataract. There are three curable and four incurable types. One is caused by excessive eating and drinking, and others by "severe headache, too much worry, weeping and wailing". Some physicians use purgation and powders, yet this is useless. Cataract is a disease within the eye and the cure must directly reach this area. (NB: Benvenutus has no use for diplomacy, referring to these practitioners as either ignorant physicians' or 'fools of quacks', depending on the translation.)

'Treat cataract by couching – purge the patient and have him sit astraddle a bench. Face him, and with a silver needle, pierce the eye coats. Hold the cataract down from exactly the length of time it takes you to say four pater nosters. Postoperatively, patients must lie still for eight days while egg white dressings are applied. They must have a light diet, and *no chicken*, as this causes rushing of blood to the eyes. Do not use steel instruments. The point can break and remain within the globe, and severe pain, cold abscess, and loss of sight will result. Gold needles are good, gold having inherent power over cold and dampness (basic astrology was common knowledge among the educated, the sun being the gold planet, source of life and warmth and banisher of cold and fog).

'Ophthalmia is a disease which shows itself on the white of the eye, accompanied by

burning and discomfort. Your patient will be tormented, and will not be able to sleep or rest due to a feeling of sand in the eye. To treat him, equal parts of hyacinth extract and sarcol (the gum of a certain tree) should be mixed in a brass mortar and dusted over the eye of the reclining patient. Do not, dear friends, use nostrums which aggravate the patient's suffering. These can cause the contents of the eye to run out between the lids, followed by blindness. In chronic ophthalmia, mix one ounce each of oak fern, milkweed, and rhubarb with one drachm each of crocus, cubebs, and cinnamon. Administer morning and evening.

'Regarding fungus, you will see patients with a fleshy growth between the nose and eyes, which some call "mulberry". The swelling looks rather like lung substance, and is granular. It may involve both lids, and if you seize it with a hook it tears through. To cure it, cut it away with a sharp knife, cauterise the wound with a hot iron and dress with cotton soaked in egg white.

'Injuries from sticks, stones, and fists are common. Apply beaten albumen on a cotton pad, and do this hastily, before the ocular humours escape! Renew this four times daily, and twice during the night. Meanwhile, anoint the patient's forehead and temples with alabaster ointment. If the coats of the eye are severely lacerated, more potent cure is needed: remove the embryos from white hen's eggs, beat them in a mortar to the consistency of ointment and apply twice daily.

'Always remember that organs are preserved by agents that resemble them – the eye is a cold organ, so use cold remedies. Patients have lost their sight from use of absinthe and frankincense which are heating agents. An excellent general remedy is the juice of fennel, rue, verbena, and sage mixed with the urine of a chaste youth. This is a powerful treatment – use it and you will believe!' 'I have made much money by many of these cures,' remarks the author proudly.

Benvenutus's last piece of advice is this: do not forget the poor if you want God to give you success operating!

FIONA ROMAN

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