

- for measuring the width of retinal vessel images on fundus photographs. *Graefes Arch Clin Exp Ophthalmol* 1988; 226: 393–9.
- 19 Feke GT, Tagawa H, Deupree DM, Goger DG, Sebag J, Weiter JJ. Blood flow in the normal human retina. *Invest Ophthalmol Vis Sci* 1989; 30: 58–65.
- 20 Weiter JJ, Zuckerman R. The influence of the photoreceptor-RPE complex on the inner retina. *Ophthalmology* 1980; 87: 1133–9.
- 21 Wise GN. Retinal neovascularisation. *Trans Am Ophthalmol Soc* 1956; 54: 729–826.
- 22 Vine AK. The efficacy of additional argon laser photocoagulation for persistent severe proliferative diabetic retinopathy. *Ophthalmology* 1985; 92: 1532–7.
- 23 Kaufman SC, Ferris FL, Seigel DG, Davis MD, Demets DL, DRS Research Group. Factors associated with visual outcome after photocoagulation for diabetic retinopathy. *Invest Ophthalmol Vis Sci* 1989; 30: 23–8.

History of ophthalmology

Notes from ophthalmic practice in the eighteenth century

A review of the texts available in 1776 allows a fascinating mental step back in time, remembering that one would see patients in candle-lit private rooms, dressed in frock coat, buckled shoes, and periwig. Fees would be paid in silver or copper coinage in the capital, and possibly in chickens, pigs, or cloth in provincial surgeries. One would prescribe using either a quill pen, or possibly with one of the 'new' steel nibs. Presumably pharmacists, as now, were skilled in deciphering erratic writing.

(William Rowley wrote an interesting definition of the specialty in 1771 – 'ophthalmology is to assist in preserving the precious organ of vision, which is of utmost importance, and to relieve the injuries which that tender and sensible part is subject to.')

In the eighteenth century, most inflammatory conditions were diagnosed as 'ophthalmy'. James Ware preferred the term 'a blast in the eyes', however, and in speculating that 'it seemed to proceed from some peculiar property in the air around us', he comes within an ace of the principle of airborne bacterial infection.

After diagnosing a case of 'ophthalmy', various treatments could be chosen. Should one feel ill disposed towards the patient, frequent and violent purges were legitimate therapy. Hippocrates himself stated that 'flux of the lower belly cured ophthalmy', and certain writers in the 1700s were quoting this with perfect seriousness. Rowley alone warns that 'purges of the drastic kind are highly improper'.

Opium was also used, applied locally or taken internally with wine, although James Ware, again quoting from the ancients, notes that Galen accidentally killed a gladiator by applying opium and warns against its use.

On the subject of bleeding, Ware and Rowley agreed on applying leeches to the temple, although they sometimes caused great swelling of the lids. Where leeches didn't work, Rowley advised bleeding in the arm, 'being sure to make a large orifice', whereas Ware preferred local bleeding and advised completely severing the temporal artery. He reported good results from this, stating that it cured by 'cutting off the

source from which blood circulates to the inflamed part'.

The initial reasoning behind blood letting was presumably the noted association between 'disease' and 'reddening'. The interesting point is why logic dictated to the ancients that the influx of blood was 'bad'. Had they only reasoned that blood, being a life force, was entering the afflicted part to repair and cure, then they might not have tried it. Rowley described the surprisingly large number of tiny vessels visible in the inflamed eye with a magnifying glass, and in saying 'that *the purpose cannot be commented on*, even though cure cannot be claimed till the redness had gone', one feels he came near to questioning the practice.

Ware further advocated bleeding of the eye itself, by scraping the conjunctiva with a small brush made of barley beads – and he was one of the more humane, asserting that 'the popular solution of corrosive is a very torturing application!'

An occupational history was taken in those days, and it was agreed that those 'forced by business to work much and late by candle light' should use solution of sublimate as a remedy. If this didn't help, then lotions of brandy and water or 'Sir Hans Sloane's ointment' were alternative measures.

Francis Geach, a Plymouth surgeon, firmly believed that ophthalmy had different causes in different weather. Those fortunate patients who attended him in warm or moist temperatures were relieved by 'wine internally and externally', perhaps with a little opium if they were lucky, whereas those who had caught their affliction from cold air had to submit to 'energetic bleeding and purging'. One wonders whether his patients ever caught on, and attended a different surgeon – or not at all – during cold spells?

FIONA ROMAN

Geach F. *Observations on inflammation of the eyes*. London: Law 1776: 1–5.

Rowley W. *An essay on the ophthalmia*. London: Newberry, 1771: 4–11.

Ware J. *Remarks on the ophthalmia, psorophthalmy and purulent eye*. London: Dilly, 1786: 22–33.