History of ophthalmology

Eyesight and the public services

Around the 1880s, eminent British ophthalmologists became concerned with matters which they sincerely believed would save hundreds of lives. This was no technical innovation, but merely the institution of proper sight testing for those who piloted boats, trains, and planes. At that time, the official requirements were lax — ships required only a 'percentage of seamen' to have 'approximately normal' vision and officials seemed completely oblivious of the dangers of defective sight.

Ophthalmologists thus felt duty bound to instruct the government and regulatory bodies, and those arriving by horsedrawn cab for the meeting of the Ophthalmic Society on 9 March 1882 would have party to the following debate: W A Brailey, dressed in the customary top hat and frock coat, opened with the statement that the 'Tests of vision at sea' drawn up by the International Medical Congress in 1881 were somewhat inadequate, yet had been opposed on the grounds that 'defects of vision have no practical interest'. Presumably, murmurs of dissent were heard in the gas-lit room.

To refute this, Dr Fitzgerald recounted a case whereby a seaman was promoted to captain and on his maiden voyage ran into and sank another vessel while coming into port. He was reprimanded and demoted for 6 months, then reinstated. Steering into port on his second voyage he ran down a steamer lying at anchor, and at the subsequent tribunal, he was dismissed in disgrace and obtained a post on a smaller vessel.

By interviewing the man and his colleagues, Fitzgerald ascertained that his vision was so impaired that he had 'long been unable to recognise street names and the numbers on omnibuses'.

It was agreed that testing of both colour and acuity should be done, preferably by someone medically qualified, on all sailors involved in signalling and lookout. Although it was noted that a member of parliament had promised to raise the matter in the House during the current session, feelings were still running high 3 years later at the meeting of January 1885. Then, Mr Bickerstaff reported the case of the Iron Duke which, sailing in convoy, altered its course to avoid a ship seen ahead by one of the five watchmen. This caused it to collide with the Vanguard, and a quarter of a million pounds' worth of equipment sank to the bottom. During the inquiry, the First Sea Lord heard with fury that the only lookout man to see this 'phantom ship' had defective vision, having twice been treated for blindness. Parliament rose up in wrath at this, as did the ophthalmologists who sent an urgent deputation, via the British Medical Association, to the Board of Trade.

Seventy years later, in 1953, the great increase in commercial air travel led the next generation of eminent ophthalmologists to consider the question of pilots' vision, the Civil Aeronautics Administration having announced (unsurprisingly) that candidates with normal vision were more likely to succeed at flight training. However, it was concluded that candidates with defective vision managed quite well if they lived to become suitably experienced. Therefore, the CAA decided to accept future trainees with defective vision, providing that their performance on landing was scrutinised before awarding them a licence! The ophthalmologists had no quarrel with this, but considered that possibly central and peripheral vision should be tested separately, as diseases such as retinitis pigmentosa could affect the latter only. (It was commented that this affliction made approach shots at golf rather difficult.) However, one ophthalmologist knew an Imperial Airways pilot with retinitis pigmentosa who asserted that the worst moments of his day were crossing Victoria station in the mornings and evenings. The company concluded that high visual acuity may not, in fact, be paramount in flying. (NB For those who feel worried, the CAA now insists on 6/9, 6/9 with satisfactory colour and peripheral vision.)

With regard to trains, the Snellen test was employed to yield a standard of vision allowing a driver to see the rails up to the next curve, and for those who drove electric trains in a closed cabin, spectators could be worn. This was felt to be satisfactory. With visual standard for motor drivers, mortality statistics (15 fatalities a day) raised cries of 'something must be done', until it was stated that more accidents occurred in the home. 'To be logical, therefore, we should not stay at home, but should seek the relative safety of our motor cars,' stated the President, and having apparently exhausted their ire on ships and planes, the company turned to other matters.

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