

A History of Ophthalmology in Lancaster County

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Historical references to Ophthalmology go back to antiquity in India, Babylonia, and Egypt. The Egyptians were particularly advanced in the practice and art of treating eye disorders, but it was the Babylonians, according to Herodotus, the historian of ancient Greece, who writes that medicine was practiced by the priests, and surgery was in the hands of skilled hand-worker or chirorgos (the Greek word that combines the words hand and work and means surgeon), who practiced couching for the removal of a cataract. Perhaps the art of couching (depression of the lens) and the removal of a cataract were first developed by the surgeons of India in the early 15th century BC,¹ but it was the Babylonians, governed by the Code of Hammurabi that motivated these skilled hand-workers to master couching. The Code allowed a handsome payment for a successful operation with the uneventful removal of a cataract and restoration of vision; but the cost to the surgeon who had a bad outcome, such as blindness, was horrific. He could have his hands cut off.²

Egyptian medicine was highly specialized, and there were those who confined their study and management to the diseases of the eye.³ The Egyptians had several ophthalmology treatments and the “Eye of Horus” was a symbolic weapon to ward off the evil one and restore health and harmony to the individual. This symbol represents a human eye with the cheek markings of a falcon. To this day, with all due respect, the “The Eye of Horus” is utilized on the Rx of our medical prescriptions today.⁴ Following the discovery of the early 17th century BC papyrus papers of Edwin Smith, there is mention of Egyptian surgery dating back to 2500 BC, it was learned that Egyptian surgery and medicine, including ophthalmology, were evidently highly advanced.⁵ Their doctors knew about and treated such conditions as night blindness, distortions of the eyelids (blepharitis, , trichiasis, ectropion, entropion), infections and inflammations, (chemosis, iritis, trachoma, chalazion, granulations, leucoma, staphyloma, and dacrocystitis), pterygium, hyphaema, ophthalmoplegia, and of course cataracts.⁶

No great advances in treatment or the management of eye disorders occurred over the millennia throughout the Greek or Arabian Period, even though there was a better understanding of contagiousity of ophthalmia and of the anatomy and pathology of the eye. This is not to make small of the contributions of Galen, Vesalius and others, but there were no practical clinical benefits until the invention of the ophthalmoscope in 1850 by Helmholtz.⁷ This resulted in notable advances in diagnosis and treatment that revolutionized ophthalmology, such as with glaucoma, infections, and inflammatory eye diseases. Of course, the use of spectacles evolved as a separate science. Magnifying glasses were used during antiquity, but a better understanding of the eye’s physiology and its optics lead to gradual improvements in the use of aids to assist in seeing, but glasses with the introduction of concave lenses were probably not discovered until the late 13th century.⁸ Glasses themselves did not come into use until the 16th century and more general use in the 18th century, during which time Benjamin Franklin invented the bifocals.⁹

The advances in America were the results of the work done by the early investigators in Europe, especially beginning in the mid-19th century. Quackery, principally among the many itinerant practitioners, played a detrimental role in the management of eye disorders throughout the colonial period. In fact, there were those, such as Chevalier John Taylor, who treated “eyes of all the nobility of England, including George II who had appointed him as his personal oculist.”¹⁰ With the introduction of the ophthalmoscope, there evolved a growing number of physicians with a special interest in eye disorders. Much of its history is tied to the expertise involving cataract surgery, but with a better understanding of anatomy, physiology, and pathology of the eye, treatments became more sophisticated.¹¹

It seems most generalist physicians throughout the colonial period treated simple eye diseases like infections and some did eye surgery, and so it was in Lancaster County. The best source available in the early treatment of eye diseases is from a series of lectures by a very intelligent and ambitious physician named George Barrett Kerfoot. He was a first generation Irishman, who served an apprenticeship with the famous Dr. Humes before going off to Jefferson Medical College to complete his medical studies in 1828. He gave public lectures on science, anatomy and physiology at the Lancaster Lyceum. He opened the Anatomical Hall on South Queen Street in 1833 to give public demonstrations on human anatomy, eye disease and surgery. These are fortunately accessible in the archives of LancasterHistory.org.¹² It is difficult to incorporate most of the named diseases and treatments into the current classification of diagnoses from his lectures; nonetheless, the following disorders represent some of the diagnoses he used and their treatment:

- A. Inflammation of the ball of the eye. Treated with the use of debility tonics, mercury, opiates and warm applications of Dover, divers, as well as various medicinal powders.
- B. Sirofulous (abscess, ulcerations, blisters). The treatment consisted of emetics, vinegar and water, cold compresses, bleeding and leeches.
- C. Gonorrhoea of the eye. The treatment involved lunar caustic (silver nitrate), Cambulls hair pumice, sulphur, caphron
- D. Selective ophthalmia. Treatments included bleeding and warm applications of solution of lunar caustics.
- E. Styes. Treatment involved warm applications of Lunar caustics
- F. Dropsy of the eye. Treatment included calomel, digitalis squills (an herb), leeches, and blisters
- G. Trachoma. Treatment involved the tapping of the eye
- H. Amaurosis. Not curable
- I. Pterygium. Treatment involved surgical removal
- J. Fistula Lachramalis. The treatment was the use of a probe to force tears into the nose
- K. Cataract. Although cataract extraction was around since Dr. Duval of Paris advocated it about 1700, it replaced couching by the early nineteenth century. By 1868, Von Graefe’s “linear method,” (1868) which involved passing the cataract knife across the eye behind the cornea, pushing the cataract out of the eye and then cover the cut with a conjunctival flap. He said if the iris comes out, don’t push it back in the eye, but remove it by folic sticks of lunar casts. If vitreous is lost the operation may not be successful.¹³

Although glaucoma was and still is one of the most common eye diseases, there is no reference to glaucoma in Dr. Kerfoot's diagnostic list.

Through the latter part of the 19th century and almost throughout the first half of the 20th century, physicians who were trained in the treatment of eye disorders were also trained to treat conditions of the ear, nose, and throat. Dr. George B. Rohrer in 1902 and Dr. Walter B. Weidler in 1903 practiced as oculists at the Lancaster General Hospital. A separate eye, ear nose and throat operating room had been established in the North Lime Street hospital by 1909. In 1924 Dr. J. P. Roebuck is listed as an ophthalmologist and Department Chief of Eye at The Lancaster General Hospital.

Dr. E. J. Stein who practiced eye and was also chief of the ENT department was followed by Dr. W. Hess Lefevre who in 1935 was chief of ENT and in 1940 was appointed chief of the eye department at the General Hospital. Dr. T. C. Shookers who also practiced both specialties continued as chief of ENT after 1946. The last physicians trained in both eye and ENT who practiced in Lancaster were Dr. Roy Deck who opened his practice in 1920, followed by Dr. John Welch, Dr. Lloyd Hutchinson and Dr. Joseph Medwick.

It was in 1916 that physicians with proven expertise in ophthalmology established a board to certify their due competence in this specialized field of medicine and surgery. This was the first such specialty board in America.¹⁴

Many of the above physicians as well as some of the generalists with a special interest in eye disorders performed a limited degree of ocular surgery until the arrival of Lancaster's first full time board certified ophthalmologist in 1930, Dr. Harry Fulton. Dr. Fulton was one of the oldest board certified ophthalmologists in America. Despite a one pack a day cigarette smoking history until age 92, he died at age 102. The only reason he gave up smoking was because he could not hold his cigarette anymore. Dr. Fulton did manage to recruit another very well-trained board certified ophthalmologist, Dr. Jerry Smith to join him, but they broke up in 10 years. Both Dr. Smith and Dr. Fulton practiced on Duke Street just across from each other. Then Dr. Fulton recruited another young associate, Dr. Dale Posey. Unfortunately Dr. Posey acquired Parkinson's disease and had to retire.

Refraction for glasses was a relatively easy task and quite lucrative, so many physicians included this task into their practices. Most generalists treated and still do treat many of the common ailments related to the eye. However, there were other non-board certified physicians as well with a specialized interest in ophthalmology that maintained an exclusive ophthalmology practice.

Dr. Paul Ripple finished his eye training at the School of Aviation Medicine and Washington University in 1953. He returned to his hometown after completing his training, and while waiting to have a new office he took over Dr. Smith's practice for 3 months in order to give Dr. Smith an opportunity to take his first vacation since he left Dr. Fulton ten years before. One month after he returned from his vacation, Dr. Smith died from a heart attack. He, like Fulton, was a heavy cigarette smoker. Dr. William Wheatley, a Wills' Eye Hospital graduate, took over Jerry Smith's practice.

Dr. Zane Brown was the next boarded ophthalmologist in Lancaster and was quickly followed by Dr. John Bowman. The following physicians thereafter joined in various group practices, Drs. Robert White, William Spitler, Justin Cappiello, Cathy Rommel, Donald Thome, Barton Halpern, Harold Housman, William Reich, Joe Calkins, Daniel Pallen, John Sharp, Kerry Givens, Patrick Tiedeken, Jeffrey Choby, Pierre Palandjian, Lee Klombers, Theodore Jones, David Silbert, Donna

Leonardo, Michael Pavlica, Diane Corallo, Persila Mertz, Thomas Krulewski, Francis Manning, Sanford Fritsch, and Julian Procope.

Dr. Kenneth Mesner was the first retinal specialist, followed by Dr. Roy Brod.

Major advances have been dramatic. One fascinating development was the discovery of a sudden increase in blindness among premature babies with the introduction of new incubators with the provision of higher concentrations of oxygen. This was increasingly common among the major teaching hospitals where these incubators were in greater use; whereas institutions such as Lancaster General Hospital saw little of it because they continued to use the old incubators. It took two years before a Canadian ophthalmologist convinced eye doctors that too much oxygen was the culprit.

The great advances in ophthalmology are numerous and have evolved mostly during the current generation of ophthalmologists now practicing. Among these advances is the management of retrolental fibroplasia and cataract surgery. In the great eye centers such as the Scheie Eye Institute of the University of Pennsylvania and the Wills Eye Hospital at Jefferson where finer surgical sutures, better needles, phako-emulsification, and smaller incisions, postop complications of cataract surgery have been greatly reduced. Cataract extraction is now an outpatient procedure, and with the development of the intra-ocular lens implant by Dr. Ridley in London, cataract surgery has reached a new era. Moreover, refractive surgery developed by Dr. Svyatoslav Fyodorov in Russia in the 1970s, first by radical keratotomy, 15 and then by Dr. Ioannis Pallikaris in 1992 and others with Lasik (Laser Assisted In-Situ Keratomileusis) surgery, cured myopia.¹⁶ Glaucoma is no longer a disorder that will inevitably lead to blindness, thanks to better drugs and laser surgery. Detached retinas are much better treated today with advances in diagnosis and laser surgery. We are now left with macular degeneration as the chief cause of visual loss in older people, but progress is evident with new laser approaches. Among the great technical advances is the operating microscope that makes eye surgery more exacting. Corneal diseases are getting better results with new corneal implants. Some developments in low vision aids are also helping some persons.

There are still congenital eye diseases like retinitis pigmentosa, which leads to blindness, where a great deal of research is taking place and some progress is being made.

With help from Lancaster's Blind Association a free eye clinic staffed by local specialists was established. It is considered one of the finest such eye services for the medically indigent and those unable to pay in the state.

One little story must end this article. Dr. Ripple had a patient who was very much in need of cataract surgery. The patient told Dr. Ripple that a powwow in Quarryville told him that he could treat his cataract. Dr. Ripple tried to convince him otherwise of this stupid claim. Then one day he came in and said he could see a lot better after receiving his powwow treatment. He told Dr. Ripple how he put some of this powder in his eyes with great pain. The powwow then couched his cataracts, utilizing this old tried method. The cataracts were still visible as they were displaced behind the pupil, but he now had normal vision. Dr. Ripple gave him a prescription for the cataract lenses if he promised to return for more definitive treatment to avoid an anticipated glaucoma or a detached retina. He never returned.

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