Scientific ophthalmology owes its beginnings to short life of Albrecht von Graefe

Despite his relatively short life, Albrecht von Graefe (1828-1870) laid the foundation for scientific ophthalmology through a brilliant career.

Born in Berlin on May 28, 1828, Graefe died in the same city on July 20, 1870, aged 42 years. Graefe's influence on ophthalmology and German medicine is all the more remarkable as he achieved so much in a tragically short career. His discovery that glaucoma could be cured by iridectomy, an idea which was first published in 1857, confirmed his reputation as the most brilliant ophthalmologist of his generation. “This operation was for Graefe what the Faust drama had been for Goethe,” writes ophthalmology historian Julien Hirschberg. Educated at the French Gymnasium in Berlin, Graefe received his baccalaureate on September 23, 1843 at the age of 15 years and four months and soon commenced university studies in philosophy, logic, natural sciences and anatomy. He received his medical degree in Berlin in August of 1847 and passed the medical state examination that winter with a certificate that read, “Excellent, also as a surgeon.” Hirschberg remarks that even at this young age Graefe earned the respect and friendship of his teachers and colleagues, which was to stand him in good stead when he returned to the university as a teacher in later years.

In the autumn of 1848, Graefe travelled to Prague where he came under the influence of professor of ophthalmology, Carl Ferdinand von Arlt (1812-1887) who was to have a major influence on his work. “Without Arlt,” he wrote, “I would not have returned to Berlin as an ophthalmologist.” After Prague, he continued his studies and observations in Paris, Vienna, and London.

In 1849, the year before he returned to Berlin, Graefe, then aged 21, wrote to a colleague about his experience visiting the clinics of Sichel and Desmarres in Paris. This letter reveals a fascinating insight into Graefe's approach to ophthalmology and gives an indication of his determination to become a brilliant teacher in the years ahead. It also indicates that this was a man with a waspish pen who did not suffer fools gladly.

“Ophthalmology is most important,” wrote Graefe, “I visit regularly the clinics of Schel and Desmarres. The first is held three times weekly (each time for four hours) and the latter five times (each time for three hours). Sichel's clinic treats a large number of patients. Each time about 40 to 50 new and 200 to 300 old patients are seen. This abundance of material alone gives his clinic its value. His lectures, on the other hand, are boring, verbose, lack substance and resemble more the chatter of old women than scientific presentations. He is a first-class diagnostician, has a good routine but belongs in his disease concepts and therapeutic approaches entirely to the old Beer-Jager school...

In another letter he writes of his experience working under Philippe Ricord (1800-1899).

“Ricord is obviously the most genial and original among all French physicians. Imagine a man who never walks but always half runs and half dances, always laughs, never makes a sour face, never utters a serious word, but only jokes and whom everybody would call a clown if he wouldn't charm everybody with his peculiar kindness and originality. Ricord lives like a prince and spends every year around 80 to 100,000 Taler which he makes. He is the most popular man in Paris.”

Graefe returned to Berlin on November 1, 1850, and, at the age of 22, founded his own clinic in Karlstrasse which he supported until he died. Hirschberg notes that Graefe spent a great deal of money on operations and care for indigent patients whose eyes he treated without charge.

In 1852, Graefe submitted a thesis, “About the Activities of the Eye Muscles,” to the University of Berlin and was appointed assistant professor of surgery and ophthalmology.

Despite his tendency to be forthright and even sometimes cruel in his criticism of others, the majority of his colleagues were unstinting in their praise of Graefe as a generous and fair-minded teacher and colleague.

He was appointed Extraordinary Professor of Ophthalmology in 1857 - the first German professor of diseases of the eye - before being elevated to full professor in 1866.

One of Graefe's basic tenets was that ophthalmology is an integral part of medical education and should be equivalent to all other medical specialties. He also insisted that each physician should study with equal diligence the diseases of the lungs, heart, eye, brain and other organs.

Graefe's archives
His contribution to the development of ophthalmic literature remains another enduring legacy.

In January of 1854, Graefe founded the journal Archiv für Ophthalmologie which Hirschberg describes as the turning point in Graefe's career and which "suddenly elevated this 26-year-old man to the forefront of all living ophthalmologists."

In the first issue, the majority of the 480 pages were written by Graefe. By the publication of volume 16, he had contributed 2,500 pages.

In the preface to the first issue Graefe wrote: "Some colleagues may find it surprising that such a young investigator would undertake such an endeavour. Indeed, I can assure the readers that I have done this not because I overestimate my capabilities; I have come to this conclusion only because nobody else seems to take the initiative."

The journal was later renamed Albrecht von Graefe's Archiv für Ophthalmologie, and is still published under the title of Graefe's Archive for Clinical and Experimental Ophthalmology, published by Springer.

Final years
In 1861, Graefe developed tuberculosis, but the condition went into remission; in the next year, he married Anna Gräfin Knuth. Theirs was a loving marriage that ended prematurely when Graefe's tuberculosis returned; in 1870, aged only 42, Graefe succumbed to the disease.

A memorial was raised in his honour on May 22, 1882, at the crossing of the Luisen and the Schumannstrasse. Of Graefe's achievement, Hirschberg wrote:

"This is now the end. Alexander the Great was 32 when he died after he had conquered the Orient leading Greece to victory. Albrecht von Graefe was 42 years old and he left to mankind a reformed and renewed ophthalmology. No weakness, no shortness of breath prevented him to immerse himself into the stale atmosphere of an overcrowded outpatient clinic and to give help as long as he could do it.

A fitting tribute to a remarkable man and ophthalmologist.

Author's note: For more about Graefe's life, please consult Volume 11 of Julius Hirschberg's, The History of Ophthalmology."

by Colin Kerr