

31st Convention of the JULIUS-HIRSCHBERG-SOCIETY Linz, 2017, 14th October

Summaries

Peter Y. Evans

Georgetown University and Ophthalmology: Roots and Growth

Both the USA and Washington's Georgetown University, the oldest Catholic university of the USA, were founded in 1789. – In 1848, four prominent physicians of the city, led by C. Liebermann, an ophthalmologist from Riga, petitioned successfully the president of Georgetown College to establish a „medical college” for Georgetown. Liebermann's adventurous life is described. All four founders became professors of their specialties at Georgetown. Liebermann died 1886. – S. M. Burnett (1879–1906) made ophthalmology instruction obligatory, was a co-founder of the Cosmos Club, brought Japanese art to the States. – W.H. Wilmer (1906–1925) separated ophthalmology from ENT. Patients of his exclusive private practice established a foundation for a Wilmer Eye Institute, which was, however, ultimately built at the Johns Hopkins University in Baltimore rather than Georgetown. From 1925 to 1956 the eye department's status diminished gradually. There were fellows but no residency training. Total lecture time dropped from 65 to 8 hours, and ophthalmology became a division of surgery.

In 1956, J. F. O'Rourke (then at the NIH under L. von Sallmann) was awarded an NIH Training Grant and became the first full-time chief. But despite enormous academic growth and 15 residents ophthalmology remained a division of surgery. In 1969, O'Rourke accepted a call to the University of Connecticut. – In 1957, P. Y. Evans had immigrated after Austrian medical school and with the Hessian specialty boards. O'Rourke hired him for Georgetown in 1958. As chief, O'Rourke was in firm academic control of the program, while Evans supervised the clinics. After O'Rourke's 1969 departure, Evans became his successor after written assurance of “no principal opposition to future departmental status.” After three years of intensive preparation achievement of that status in 1973; appointment of Evans as chairman of the new department, the “Center for Sight”, in 1974. Often copied: A two-year training program for ophthalmic technicians, inaugurated in 1963. The 1969 formation of the Joint Commission on Allied Health Personnel in Ophthalmology is described. Today there are over 25,000 of this allied health personnel certified by IJCAHPO and working all over the world. – In 1984, M. Lemp became department chairman, succeeded by H. Cupples in 1992 and J. Lustbader in 2005.

Albert Franceschetti

Ophthalmology and Genetics in Switzerland during World War II (1939–45)

Many foreign colleagues were guests at the Geneva Department of Ophthalmology during the war. This was the beginning of a period of glory of the Swiss Ophthalmology.

It was also the beginning of Genetics in Switzerland and Europe with its good and dark sides. These great colleagues should be remembered.

Jutta Herde

The parents of Robert Machemer, the inventor of Vitrectomy

Helmut and his twin brother Hans were born on May, 7th 1903 in Sprendlingen/Rheinhessen to Jakob and his wife Marie Sommer, owners of wineries and farms. After graduating from High School in 1922, Helmut started studying medicine in Freiburg. He changed to zoology in 1925 and received a PhD in 1929. During a zoological trip to Bodensee in 1929, he met Erna Schwalbe, a medical student (born January, 3rd, 1909). She had Jewish looks from her mother's side. She graduated in 1931, worked first at the university in Berlin and then at the university in Kiel. She also worked for Helmut, giving him a chance to work on his research. They got married in 1932 that is when the Jewish roots were confirmed. In December of 1930, Helmut graduated in medicine. His intention was to work for Professor Möllendorf or for Professor Aschoff in Freiburg. As he was accepted by Professor Szily in Münster, he abandoned the previous ideas. In January 1932 Helmut started working for Professor Szily as a junior assistant and was promoted to senior assistant. The young family moved to Stadtlohn. In that time they faced many family problems, the divorce of Erna's parents, illnesses of her and his parents and financial problems. This put a big burden on Erna. She spent a lot of time with her father in Bad Homburg. Also the political situation let them to think about divorce. In 1935 Professor Szily lost his position and Helmut changed jobs to work as an assistant for Dr. Decking in Stadtlohn. In 1933, his son Robert was born, 1934 his son Hans and in 1937 his son Hans was born. In 1937, he volunteered to join the army. He didn't get the permission to practice independently. In 1939 he volunteered to be recruited. He gave his written will to Dr. Schlüter in 1939. On the 13th of September, 1939, he was called to the army. He used his time in the medical unit to finish his research which he sent to Professor Thiel. He took part in the French campaign and was promoted to sergeant doctor. In 1940 he and his wife took part in the German Ophthalmological Society Congress. With the 16 infantry battalion, Helmut travelled through Romania and Bulgaria to Russia. Erna's application for permission to practice independently was also rejected. She started having epilepsy. She was diagnosed with brain tumor. Helmut was responsible for photo documentation. In his free time he continued with research. He applied to be promoted to an officer in order to secure the aryan heritage for his wife and children. In 1941 he received the Iron Cross 2nd Class and in 1942 the 1st Class. On May, 18th 1942 he was critically injured by a grenade in his car. The driver survived. Erna received the news of his death on June, 5th. He was buried in the hero's grave in Kamenke close to Charkow in Ukraine. Posthumously, he was awarded the panzerkampfwagen badge and recognition as an assistant doctor. For the family Machemer, the being equalized with the Aryans was a great success. Erna died in 1970. The oldest of the three sons, Robert, was the inventor of vitrectomy.

Manfred Jähne

Dr. Otto Just (1836–1890) – First Eye doctor in Zittau, Founder of the Eye hospital

Otto Just was born on 7.9. 1836, he stemmed from an esteemed patrician family of Zittau. His father was an advocate and a syndican of a foundation. Just visited the grammar-school in Zittau from 1846 to 1855, afterwards he studied medicine on the Leipzig University. His academic teachers in ophthalmology were the professors Ch. Th. G. Ruete and E. A. Coccius. He graduated rite to MD in Leipzig on the 26.11.1859. Otto Just was supervised in ophthalmology for 3 months by F. von Arlt

and E. von Jaeger in Vienna in 1860. Afterwards he worked as a general eye doctor in Zittau. Later he had a longer course of practical work for cataract surgery by Albrecht von Graefe in his eye clinic in Berlin in 1868.

O. Just opened his eye hospital in the Neue Strasse in Zittau in 1869. An enlargement on 30 beds was three years later. It is the third oldest not-university eye clinic after Leipzig and Dresden in the kingdom of Saxony. The patients were from Upper Lusatia, Silesia and from foreign country Bohemia. Two figures as tall as a man were on the eastern side of the hospital building, a big spectacles from wrought-iron was above the main entrance, later a bust of Albrecht von Graefe was in the entry hall.

O. Just spent some time in Prof. Alfred Gräfe's eye clinic at the University of Halle in 1872. He transferred the praeoperative disinfection of the face with Carboll.

It is important, that Just had never seen a suppuration of the cornea in 200 cataract operations in the time from 1875 to 1878.

Just was very active in pharmacology. He revised the book „Heilformeln für Aerzte und Wundaerzte“ by Prof. Walther, Leipzig in 1868. He realized tests with drugs how boric acid bandage in ulcus corneae serpens, with different eye drops and solutions with cocain between 1878 to 1885. He published 6 casuistics and therapeutical papers in „Klinische Monatsblätter für Augenheilkunde“.

Each year extensive printed reports, with exact protocols of all operations too, came appeared from his eye hospital. The operated cataracts were graduated in degrees of hardness in those days, further he published a paper „Nucleus cataracts in childhood“ (1880). Just realized examinations for refraction and color blindness in pupils in grammar-schools.

Dr. Otto Just died of an influenza with pleuritis on 5.1.1890.

Just was a good ophthalmic surgeon and founder of an eye hospital, treated about 60.000 patients in 30 years as an eye doctor. He published many papers.

Julius Hirschberg and Otto Just knew each other very well.

Guido Kluxen

The discovery of the retinal blood-vessel figure

The retinal blood-vessel figure is a subjective entoptoscopic and physiological perception phenomenon that Purkinje described in his investigations about the subjective perception along with many other such observations. This happened thirty years before the invention of the ophthalmoscope by Hermann von Helmholtz.

Guido Kluxen

Influence of the contact between Purkinje and Goethe on the physiology of vision

The young Purkinje wrote his dissertation modeled on Goethe's color theory without this reference. It was no plagiarism, however, Goethe was amazed that Purkinje had cited him at any point. In December 1822, they met together in Weimar. Both had, each in his own way, the so-called "Eye ghosts", afterimages and entoptic phenomena, which were still widely interpreted as signs of illness recognized as physiological phenomena in healthy eyes.

Frank Krogmann

Ophthalmology in Upper Austria

The lecture deals with the development of “modern” ophthalmology in Upper Austria, where Karl Denk is the founder. At the beginning of his activity in Upper Austria he was the only specialist for ophthalmology. He founded the eye division in the Hospital of the Charitable Sisters of Linz in 1907, which after the merger with the Hospital of the Merciful Brothers has become the leading eye clinic of the country. Further personalities of the Upper Austrian Ophthalmology will be presented.

Frank Krogmann

Franz Ignaz Pruner (1808–1882) – son of an office-employee in the Upper Palatinate became the „Bey“ in Egypt

1808, Franz Ignaz Pruner was born in Pfreimd in the Upper Palatinate (Bavaria) as son of an employee at the Royal Rent Office. Since 1826, he studied philosophy at the Ludwig-Maximilians-University in Munich, followed by medicine. Pruner had excellent teachers, whose names still have their sound in the German medical history, as Ignaz Döllinger (1770–1841, anatomist and physiologist), Johann Nepomuk von Ringseis (1785–1880) and Ernst von Grossi (1782–1829, internist). Pruner was promoted to Doctor of Medicine in 1830. From 1831 to 1860 he worked intermittently in Egypt and was there in a leading position. Viceroy Mehmed-Ali summoned him to the Chair of Anatomy and Physiology of the Medical School of Abuzabel near Cairo. He studied at the well-known Tyrolean eye doctor Francesco Flarer (1701–1850) in Pavia. In 1833 Pruner went to his new Egyptian home in Cairo. Here, in 1834, he began his further career in Egypt with his appointment as Director of the Military Hospital in Esbekieh. The royal family was also drawn to the still young Bavarian man. During a trip to the Arabian Peninsula, he treated a member of the royal family with an eye disease. The result was two years later an appointment to the board of directors of the main columns of Cairo and Kasr-el-Aini as well as the professor of ophthalmology. In 1839 he became the physician of Abbas-Pasha, the vice-king, and received the title “Bey”. For the treatment of “Egyptian eye disease” (epidemic, infectious eye diseases such as trachoma) he used the so-called „Luxorwater“, a saturated zinc-alau solution. With this medicine, he successfully treated up to 20,000 patients. The year 1860 brought a radical change in his life! For health reasons, he had to leave Egypt. He went to Paris, where he turned to phrenological, ethnographical, and anthropological researches. Due to the outbreak of the Franco-Prussian War of 1870–71, he had to emigrate from France and moved to Pisa where he was a private tutor. There he died 1882.

Gisela Kuntzsch-Kullin

Art of a special kind: Votivgifts – evidence of common faith and their symbolism

The word „votiv“ is derivable from the Latin word “vovere” and “votum”, what means in German “to promise something” or making a vow.

Votivgifts valid as returning thanks for received act of grace in case of illness and distressed condition. They are close in combination to usage of pilgrimage and popular art.

Votivgifts were already set while produce a request for help. There are two kinds of votivgifts: 1. the votivs and 2. the votivpaintings.

You can find votivs in all civilizations and at all time. They are moulded of bodyparts where the votant (the person seeking for help) take care of.

They are made of clay, wax, silver and gold.

In this discourse there will be a special view to eyevotivs, which are still existing in some catholic churches and places of pilgrimage, but also in stock of museums and private collections.

Votivpaintings usually sines around 1500, shows a certain arrangement:

1. Presentation of the respective appealed saint, to whom request or gratitude was turned as a divine picture. 2. the votant and 3. making plain the situation, why a votation was aroused.

Mostly the producer of votivgifts were layman, who received their orders by votants. The author pushed forward for votiv and votivpaintings marks-mainly with eyes – in museums, places of pilgrimage and private collections.

With this picture presentation there will be detailed informed upon the signification and symbolism of eyevotivgifts. The votivpaintings regarding their simplicity are at least evidence of their term in medical-historical and religious view.

Efstathios Papadopoulos

Alexandros Trantas – The first gonioscopy in vivo

We will have a closer look on the biography of Alexandros Trantas. Born in a small Greek village, he made researches on the trachoma disease and gave his name to the characteristic cornea spots (Trantas-dots). Further on, he was the first to observe the chamber angle in vivo.

Gudrun Papadopoulos

Benediktos Adamantiades – A life between war and science

Born in the Ottoman Empire in the end of 19th century, Benediktos Adamantiades became doctor of ophthalmology in Paris. He returned in his country at the time of the First World War. Later he achieved to be the head of the ophthalmolgy department of the Hippokration Hospital in Athens. Today he is famous for his research on Adamantiades-Behçet disease. But this was not his only achievement.

Dieter Schmidt

Hanns-Helmuth Unger

Hanns-Helmuth Unger was born on August 23rd, 1919 in Leipzig. He was one of the important senior physicians at the University Eye Hospital in Freiburg. He studied medicine in Berlin, Leipzig, Königsberg und Freiburg and participated as physician in the last years of World War II., and he became licensed physician in Freiburg in 1943. He wrote his thesis on “Expulsive haemorrhage after cataract extraction”. In 1952 he became specialist in ophthalmology. In 1962 he was appointed Professor of Ophthalmology in Freiburg. In 1966 he founded a practice in Freiburg. He was very popular as an ophthalmologist in the population of the city. He published many important articles on the ocular chamber angle and on glaucoma in international journals, also in cooperation with the anatomist Johannes Rohen. Unger was the author of a textbook chapter on “The organ of sight” (“Textbook on the human anatomy”; Eds. Benninghoff-Goerttler; Volume 3, 7th edition). Additional publications were articles on phacomatosis and on congenital vascular anomalies of the eye.

Hanns-Helmuth Unger had the reputation as a precise, careful, and critical physician and scientist. He died on September 1st, 2008 in Freiburg.

Sibylle Scholtz

“Mystery is in the eye of the beholder”. On the history of the “Haidinger’s Brushes”

Purpose

The entoptic phenomenon of „Haidinger’s Brushes” was first described by Wilhelm von Haidinger in 1844. The ability of the human eye to see polarized light has not been known so far. This poster will give a brief survey of „Haidinger’s Brushes” and its discoverer.

Methods

Selective literature search in books and journal articles via PubMed, Google Scholar and Google as well as close cooperation with the University of Applied Sciences in Aalen (Germany).

Results

The phenomenon of „Haidinger’s Brushes” still is not completely understood. So far it is regarded as a result of the combination of the radial orientation of the nerve fibers coming from the Fovea centralis and the pigments (Xanthophyll) found in the Macula. Both together seem to act as a radial symmetric polarization filter.

Conclusions

In 1844 Wilhelm von Haidinger showed that polarized light could be seen directly by the human eye when assessing the entoptic picture of „Haidinger’s Brushes”. Today this phenomenon is used in ophthalmology as a test for fixation and as pleoptic training of foveolar perception.

Gottfried Vesper

Ignaz Philipp Semmelweis (1818–1865) – A great Austrian physician of world importance on gold coins

Semmelweis, a pioneer of gynecology in Vienna, reduced the high mortality rate of women by half while his work at the first maternity hospital. His achievement in combating the childbed fever is the introduction of disinfection by handwashing with a chlorinated lime solution.

Poster:

Sibylle Scholtz, Carsten Rupprath, Frank Krogmann, Gerd Auffarth

A castle, a ghost – and an ophthalmologist

Purpose

Why can a female ghost be watched from time to time at the castle in Karlsruhe, Germany? Why does she shock people almost to death in a building that was not even built when she was living? An ophthalmologist knew the answer: Dr. Johann Heinrich Jung-Stilling (1740–1817).

Method

Selective literature search in books and journal articles via PubMed, Google Scholar and Google

Results

Multitalented Jung-Stilling was a famous ophthalmologist but also a prolific writer, lay theologian and professor of economic sciences. Astonishingly, besides his scientific and theological background, he believed in the existence of this ghost. According to Jung-Stilling, the ghost might have been a Bohemian noblewoman, born in 1420, who was married to a wealthy baron who treated her rather badly. After his death, she lived a life devoted to charity but died in heavy resentment to her husband. This resulted in her haunting all castles where her relatives had lived which included also the castle in Karlsruhe, the town where Jung-Stilling lived for many years and where he died in 1817.

Conclusions

As Jung-Stilling regarded himself a “true Christian“: he performed cataract surgery for free for poor people which led to serious financial difficulties for himself. Jung-Stilling was a philanthropic ophthalmologist. He was married 3 times and had 13 children. Moreover, he was a prolific writer: he published numerous scientific and religious articles and books as well as his theory of ghosts in 1808.

Kristian Gerstmeyer, Sibylle Scholtz, Frank Krogmann, Gerd Auffarth,

Astigmatic vision – more than hundred years of misconceptions, fallacies and distractions

Purpose

Kepler and Descartes did influence the interpretation of the human mode of perception by introducing the first theory of a retinal image in the 17th century. Even today, the misinterpretation of the visual effect of astigmatism can still be proven by its visual presentation.

Method

Selective literature research of books and articles in journals via PubMed, Google Scholar and Google, additional analysis and summary of personal direct literature search.

Results

“El Greco’s fallacy“ was described in 1913 for the first time. It assumed a distorted retinal image due to astigmatism as a cause of the artist’s verticalizing painting style. The traditional logical rebuttal of this fallacy also remains connected to the theory of imagery by interpreting astigmatism as a constant error of perception, and thus conveys faulty concepts regarding astigmatic vision and its illustration, e.g. in patient information on toric intraocular lenses.

Conclusion

The processing of visual information is dynamic and is continuously taking into account real optical impressions of the environment as well as its adaption to perceptual phenomena. Astigmatism is an optical aberration characterised by a blur effect, therefore it varies in its extent under these conditions.

Sibylle Scholtz, Mary Safwat A. Attia, Ahmed Assaf, Lee MacMorris, Tamer Tandogan, Frank Krogmann, Thomas Lips, Gerd U. Auffarth, Mohamed Shafik Shaheen

Your eyes speak a million words more than your mouth.

Kohl – cosmetic, protection against the evil, ophthalmic therapy or simply toxic?

Purpose

Kohl might be only as a cosmetic product today but in ancient times it was considered to have magical powers. In fact, this deceptively simple beauty product may be one of the most ancient known ophthalmological therapeutics.

Methods

Selective literature research of books and journal articles via PubMed, Google and Scholar.

Results

Kohl was generously applied on the skin around the eyes. It served multiple roles in antiquity (e.g. veneration of the deities, satisfying religious obligations and beautifying desires). As for its therapeutic effect, its cooling quality it was used to reduce sun's glare and it was a fly repellent. Kohl is mainly composed of the dark mineral Galena (lead sulfite, PbS). Its antibacterial effect is based on its content of high levels of lead. Prolonged application of Kohl, especially in children, can result in excessive lead storage in the body which would affect bone marrow and the brain.

Conclusions

Since the Bronze Age, Kohl was used world-wide for cultural, social and hygienic purposes. Now it is available in several forms: liquid eyeliner, pencils, paste or powder. Today its high content of lead and heavy metals demands strict regulations in its manufacture to ensure a safe product. Enhancing one's beauty with dramatic eye make-up reminds one that Cleopatra's beauty secret was not Maybelline but lead sulfate.