Danish ophthalmology from 1950 to 1975

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Many Danish ophthalmologists still remember the years from 1950 to 1975. The period has not yet become history, which usually would require a distance in time of 50 years or more. This period of 1950–75, therefore, is neither history nor is it modern time. I accepted the invitation to write about these years with some hesitation, because the presentation cannot be given the traditional form of a review of the tales and experiences of 'famous men and women', simply because in this situation I would not have the usual freedom of the writer of historic papers accorded by the fact that the people are dead and thus cannot correct the stories told.

This paper, therefore, will not be a review of the members of the Danish Ophthalmological Society and their various activities from those years. Actually, I am conscious of assigning an unjust characteristic, influenced by my personal contact or non-contact with the different people. Rather I shall concentrate on events from that time, to the extent they, today, seem to have been important. Later historic reviewers may of course come to other priorities.

I hope colleagues of my age and older will mainly agree to the description, but in particular I hope younger ophthalmologists will read the paper with surprise and pleasure.

In 1950 I was still a schoolboy, but I remember from the discussions at the dinner table in my home many contemporary ophthalmological problems. My father (Holger Ehlers 1899–1985) was an ophthalmologist and a professor at the University Hospital in Copenhagen (Rigshospitalet) from 1947 (cf. Ry Andersen, this Supplement, pp. 14–15). He was also the patriarchal head of his home. When he told stories we all listened, and this was how I first learned about the art and science of ophthalmology. My first direct personal contact with ophthalmology was in 1962, when I was given a 3-month position at the Department of Ophthalmology at Copenhagen County Hospital (Gentofte).

The Danish Ophthalmological Society 1950–75

I think it is correct to note that university and hospital ophthalmology was centered around the Eye Department of Rigshospitalet, located on Blegdamsvej in Copenhagen. Figure 1 shows a painting of the house from 1926, but it looked exactly the same until in 1970 the department moved to the 6th floor in the new central hospital block.

The meetings of the ophthalmological society usually took place in the lecture hall of the old eye clinic, in the evening or on Saturday afternoon, in which case the sun would shine through the tall windows. It was before visual presentation by slides was the usual and almost obligatory way of presenting data. The opening remark, 'First slide please', was not yet invented. Communication was verbal and usually followed by a lively discussion. Case reporting was still very much accepted as the way the young ophthalmologist presented himself (or occasionally herself) to the world of ophthalmology.

If occasionally a diapositive should be shown this was the task of the Clinical Assistant, the university appointed assistant to the professor. In those days we had already experienced the many ways in which a slide can be projected: upside-down and right–left mirrored. Slide previewing was an unknown procedure. The drawing of the curtains to ensure darkness was also the task of the clinical assistant.

The evening meetings always had a pause, where those members who wanted to participate in the late open sandwich arrangement could enter their name and the number of sandwiches they wanted. The order was telephoned to the restaurant, the 'Botanique', in Gothersgade near Nørrevold, in central Copenhagen. Here the discussions continued, probably with often a more practical content.

Almost every ophthalmologist in those days worked in clinical practice, either full time in their own clinic, or for those who had hospital appointments only in the afternoon. Work in hospitals stopped at noon. The economic basis for the ophthalmologist's practice was agreement between the doctors organized in different unions and the private sick-benefit association. Public assurance, as it is known today, came much later. From the point of view of the ophthalmologist the system in Copenhagen was very simple. He was paid a fixed amount every year for each person registered in his practice, irrespective of whether or not this patient had an eye disease and came to see him. Presentation of accounts was unnecessary. In the country outside Copenhagen a more ordinary system prevailed, where payment followed the patient's visits to the doctor.

A common Nordic education was arranged, with courses being held in each of the countries: Stockholm in 1948, Copenhagen in 1950 etc. They continued until mid-1960s, when they were substituted by the present national-based education system, organized and controlled by the central health authorities (Sundhedsstyrelsen). In 1952 the second chair in ophthalmology was inaugurated

Fig. 1. Painting of the house from 1926.

at the University of Aarhus, while the third, at Odense University, was established in 1965. With these new universities education in ophthalmology was extended to cover the whole country.

Scientific ophthalmological writing in those years was a one-man-show (and occasionally one-woman). The modern tradition with several authors to an article or book was considered only with scepticism. How could one evaluate the quality of the author when there was more than one? Competition was hard in those days! However, one advantage now is that an impression of the international impact of Danish ophthalmology can be gained from a list of those who received the doctor's degree from one of the universities. The professors in the period were, in Copenhagen, Holger Ehlers, Poul Brændstrup, Eilif Gregersen, Mogens Norn and Hans-Walther Larsen; in Århus, Viggo A. Jensen and in Odense, Poul Martin Møller.

The dissertations were as follows.

- 1951 Jens Edmund: Photoelectric measurements of the corneal gloss.
- 1952 Jørn Boberg-Ans: On the corneal sensitivity with special reference to clinical methods of examination.
- 1952 Johanne Marie Brændstrup: The clinical temperature of the eye.
- 1952 Valdemar Hertz: Choroidal ablation after ocular contusion.
- 1952 Karsten Knudtzon: Exophthalmos in primary intracranial tumours.
- 1952 Elise Vesterdal: Iridocyclitis. Clinical studies on ætiology, pathogenesis, and therapy with ACTH and cortisone.
- 1952 Grethe Vilstrup: Studies on the choroid circulation.
- 1953 Poul Barfoed: The bacterial flora of the conjunctiva.
- 1954 Erik Skeller: Anthropological and ophthalmological studies on the Angmagssalik Eskimos.
- 1957 Poul Martin Møller: The pressure in the orbit.
- 1957 Knud Bech: The basophilic substances in the retinal ganglion cells and the physiological activity changes in these cells.
- 1958 Torstein Bertelsen: The premature synostosis of the cranial sutures.
- 1958 Axel Mahneke: On flicker-fusion frequency.
- 1959 Emil Frandsen: Eye disease following BCG vaccination. Studies on the significance of tuberculosis in the aetiology of certain eye diseases, with particular reference to ocular complications after BCG vaccination.
- 1959 Poul Kjer: Infantile optic atrophy with dominant mode of inheritance.
- 1960 Eilif Gregersen: Studies on the spongy structure of the human iris and its imbibition with the aqueous humour.
- 1960 Anna Dorthea Frandsen: Occurrence of squint. A clinical–statistical study on the prevalence of squint and associated signs in different groups and ages of the Danish population.
- 1960 Hans-Walther Larsen: Diabetic retinopathy. An ophthalmoscopic study with a discussion of the morphological changes and the pathogenetic factors in this disease.
- 1960 Mogens S. Norn: Cytology of the conjunctival fluid. Experimental and clinical studies based on a quantitative pipette method.
- 1961 Viggo Dreyer: Studies on visual contrast thresholds.
- 1962 Godfred Larsen: Experimental studies into the influence of hormones, avitaminosis-C and sensitization on ocular mesenchymal tissues.
- 1963 O.A. Jensen: Malignant melanomas of the uvea in Denmark 1943–52.
- 1965 Niels Ehlers: The precorneal film.
- 1966 Svend Erik Lorentzen: Drusen of the optic disk. A clinical and genetic study.
- 1966 Mette Warburg: Norrie's disease. A congenital progressive oculo-acousticocerebral degeneration.
- 1967 Vagn Ohrt: Diabetic iridopathy.
- 1968 Ernst Goldschmidt: On the aetiology of myopia.
- 1968 Svend Vedel Kessing: Mucous gland system of the conjunctiva. A quantitative normal anatomical study
- 1971 Knud Nørskov: Routine tonometry for tracing glaucoma.

Ophthalmological eye care in the 1950s

A sufficient clinical ophthalmological examination could, in those days, be performed without a slit-lamp biomicroscope. Examination was performed using a 60 D loupe for observation and a 20 D lens for focal illumination. Ophthalmoscopy took place in a dark room, either as direct ophthalmoscopy with a hand-held battery-operated ophthalmoscope or as indirect ophthalmoscopy using the concave mirror introduced by Liebreich as a modification of the direct ophthalmoscopy technique of Helmholtz. Measurement of intraocular pressure relied entirely upon the Schiøtz indentation tonometer.

Refraction and prescription of glasses took up a substantial part of the time. Refraction was performed subjectively with the Snellen letters at 6 m using fogging, cross-cylinder and astigmatic fan. Objective methods were the ophthalmometer (Javal-Schiøtz

and Helmholtz principle) and sciascopy (retinoscopy). The medicaments available were atropine for treatment of uveitis and keratitis and pilocarpine for glaucoma. External irritations were treated by zinc sulphate and resorcinol eyedrops and infections with mercury containing ointment or 1% silver nitrate. Eye-washing with boric acid solution was also much in use. Antibiotics and steroids were not available.

The cataract operation was performed using topical cocaine anaesthesia with the von Graefe cataract knife, followed by total superior iridectomy, discission of the anterior capsule and expression of the nucleus. Regarding the succesful expression of the nucleus, it was decisive that the cataract was mature. Secondary cataract was frequent and was treated by disection with a knife. Sutures were not used routinely. Intense discussion took place as to whether to switch to intracapsular technique with capsular forceps or erisophake. With the introduction of cryo-extraction by Krawicz in 1946, for decades the tide was in favour of intracapsular extraction.

Glaucoma operations were Elliot's trephination or Holth's iridencleisis. Retinal surgery was limited to extrascleral procedures a.m. Larsson-Weve with diathermy and eventually indentation.

Surgeries took place in the morning; at noon everyone left the hospital to work during the afternoon in practice. Doctors in training were assistants: the well-known craft's apprenticeship.

Developments 1950–75

What were the big steps forward in the years 1950–75? On the medical side the development came around the beginning of the period, with the introduction of steroids and penicillin. Later came all the known antibiotics. Steroids revolutionized the treatment of iridocyclitis. A Danish thesis from 1952 by Elise Vesterdal had the title: 'Clinical studies on aetiology, pathogenesis and therapy with cortisone and ACTH' (Vesterdal 1952). This purely clinical study has to be seen against the background of earlier treatment, which consisted of atropine, hyperthermia and patience.

In a similar manner, antibiotics changed the therapeutic situation regarding infections. Pneumococcal infections in tear sac and cornea and of course endophthalmitis could now be treated rationally. A Danish thesis by Gerhard Rønne, from the period just before the introduction of antibiotics, illustrates the hopeless situation for postoperative endophthalmitis. It was entitled: 'Treatment of panophthalmia with intravitreal chloramin injections' (Rønne 1943). Gerhard Rønne is remembered today for his pioneer work on ortoptics and amblyopia (cf. Ry Andersen, this Supplement, p. 13).

On the technical side, development was in the occurrence of one or more slitlamps in every eye clinic. The modern slitlamp with coaxial illumination appeared in the 1960s. Together with the slitlamp went the applanation tonometer and the gonioscopic and three-mirror lenses of Goldmann.

Photocoagulation was introduced in the early 1950s; the first argon lasers were from the 1970s. The use of photocoagulation was on a purely empirical basis, and the early results were not encouraging.

As something new the centralization of retinoblastoma treatment was, from the late 1950s, pushed forward by S. Ry Andersen, and given a radiotherapeutic background by Sigvard Kaae, working first at the Finsen Institute in Copenhagen and later at Århus University Hospital.

The situation in 1975

At the end of the period we are closer to our present time. What was different from today's ophthalmology? As I recall it myself, the difference was in the entire setting of the ophthalmological examination. The examination began in an illuminated room, but for detailed investigation of the bottom of the eye we still took the patient into a dark room. Indirect binocular ophthalmoscopy became popular. The use of perimetry, notably the Goldmann perimeter, was at its summit. The morphology of visual field defects was studied carefully. Automated perimetry was at only an early stage. Kinetic perimetry was still used, although static automated perimetry was advancing through the pioneer work carried out by Torsten Krakau and Anders Heijl at the University of Lund in Sweden.

In those days the prescription of cataract glasses to the operated patient was an art. The thick, heavy glasses had many optical errors and the late Danish eye-surgeon Jørn Boberg-Ans (1916–84) is quoted for the remark: 'The most frequent complication to a cataract operation is the collum femoris fracture, when the patient falls trying to go down a staircase wearing his new glasses.' Bifocal glasses were an even greater challenge; multifocals were just in their infancy.

In the early 1970s we thought for some time that the future rehabilitation for the cataract operated patient was an extended-wear contact lens. Intraocular lenses had to await the general use of the operation-microscope and the development of microsurgical instruments. Today it is easy to see that the 1970s were the beginning of the new technical era.

However, what has also changed much since then is the relation to the outside world in terms of the medical industry and in general the press, the attitude of the health authorities, the lawyers and the patients. From 1959 to 1975 ophthalmologists arranged their own scientific and social meetings. Exhibitors from the industry were accepted with reservation only and they were not allowed to organize or to take part in the meeting itself. Relations with journalists were, in a manner of speaking, 'upside down'. Ophthalmologists were esteemed people of undisputed morality. They were mentioned in the newspapers for new inventions and their extensive care for patients. This, of course, is different today. It seems likely that the critical attitude of patients and the involvement of lawyers is related to the same basic suspicion, which unfortunately has also led to the introduction of defensive medicine within ophthalmology.

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