

# THE FIGHT AGAINST BLINDNESS

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*We publish this address, delivered to the University on the 12th December 1962, as a Foundation Day oration for its intrinsic interest. There is a surmisal that the number of blind persons in Malta may not have changed greatly since 1958, but a Blind Persons census is being taken now and the new figure should be available soon.*

This year, an international effort is being made to preserve sight and the theme of World Health day held on April 7th, has been the prevention of blindness. I do not know whether it has been a mere coincidence that it has pleased the Senate to choose me to deliver this oration. Be that as it may, it is a wonderful opportunity to focus the attention of the audience on this subject and to assess our

achievement in this field.

The magnitude of the problem will be appreciated when one is informed that the number of blind people is not known. It is probably fifteen millions but certainly not less than ten millions. For example, within an hour of hearing this oration, in Britain, somebody will be going blind; a new name is added to the register of blind persons every 43 minutes, that is over 12,000 (twelve thousand) in any year. Had these people benefited in time from modern preventive medicine and surgery, over two thirds of them could have preserved their sight.

Sight has always been regarded as man's most precious possession. From the earliest times, the eye has figured in painting and sculpture as an artistic expres-

sion and as a symbol in religion and magic. The function of this organ has in all times excited admiration. But the empiric medical science of the ancients was powerless against diseases affecting the eyes. People had more faith in gods than in men. Finding myself in Epidaurus, in the ancient temple of Aesculapius, I could not help noticing the number of inscriptions concerning the eyes.

In the old and in the new testaments, a cure of the diseased eyes was considered an extraordinary event. In the book of Tobias, the cure of the old blind man has an important place, and is the subject of a picturesque description. In the gospel, one can find numerous details on the attention of our Lord towards the blind. It will not be out of place, here, to quote Saint Matthew (6. 22. 26): "The eye is the light of the whole body, so that if the eye is clear, the whole body will be lit up. Whereas if the eye is diseased, the whole of the body will be in darkness. And if the light which thou hast in there is itself darkness, what of thy darkness. How deep will it be!"

Of all the branches of medicine, ophthalmology is one of the most delicate because of its subject, the human eye. If a sense organ implies a grouping particularly dense of specialized tissues, vessels and nerves, the eye is certainly the richest of all. The mobility of the eye in the orbit, complicates in an extraordinary way, its relation with the rest of the organism. The number of conditions necessary for a proper functioning of sight, multiply the risk of disturbance and disease. Because of its extensive vascular supply and variety of tissues, the eye is often affected by disease in distant parts the body. Functional disease of the kidneys and liver, metabolic disturbances, microbic invasions, anomalies of the circulation, lesions of the local and general nervous system are all possible sources of an eye disease. It seems almost impossible to set a limit between the relations of the eye and the organism. Such is the vast domain for our research and clinical activity, medical and surgical.

Ophthalmology had its beginnings far

back within the mists of the Hindu and Egyptian civilizations, thousands of years before the birth of Christ. However, until comparatively recent times, Europe served as its nursery and here it grew into the adolescence of a science and reached maturity.

The year 1950 marked the centenary of ophthalmology as an independent speciality, with devotees of its own, within the large kingdom of medicine. Among all international medical congresses, the activities of which survive, its congress was the first to be instituted (1857). Since this congress, great strides have been made into the care of vision, the prevention of blindness and the relief of the blind.

However, it can be said that modern ophthalmic surgery is now two centuries old, and dates from the achievement of Jacob Daviel, oculist to Louis XV, who introduced the modern operation of cataract in 1747 and communicated his method to the academy in Paris in 1752. He opened the porch, not only of the anterior chamber, but of the whole wide field of eye surgery.

Ophthalmology became an exact science when on December 6, 1850 Herman Von Hermoltz first demonstrated the ophthalmoscope to the Physical Society of Berlin, thus earning the honour and the glory of revealing to the world the mysteries of the inner eye. As a consequence of this discovery, whole branches of knowledge were opened. In 1855, Von Graefe gave the first description of renal retinopathy, thus laying the foundation of medical ophthalmology. This was followed by his recognition of papilloedema and the inauguration of neurophthalmology. The same Von Graefe erected a second milestone when he introduced basal iridectomy into the treatment of acute glaucoma; whilst, later on, Lagrange led the way to successful operation for chronic glaucoma.

In 1884, Koller was the first to use cocaine and thus introduced local anaesthesia, which made intraocular surgery possible.

Donders, by his work on refraction and Snellen by his test charts founded a

scientific method of prescribing glasses, which since the invention of spectacles, at the end of the thirteenth century, had been a purely empiric technique.

Among the renovators of ophthalmology, Bowman and Arlt take a worthy place.

Some 60 years ago, Gullstrand furthered enormously our diagnostic abilities by introducing the slit-lamp, thereby opening a new field of examination and research, so well exploited by Vogt and others. Corneal grafting, of which we are so proud these modern days, has more than a century old history. Henry Power demonstrated cases of it as early as 1872. The only new concept that has been added to the technique of Surgery is the treatment of retinal detachment by Jules Gonin (1930). Many patients, otherwise, condemned to blindness can never be grateful enough to their benefactor. A Gonin medal has been struck to commemorate the work of this surgeon. It bears the following inscription: "*Deo Juvante Miseris reddidit Lucem*".

Before finishing this short review of the progress of ophthalmology, mention should be made of the recent important discovery by Barraquer (1958) of the effect of alphachymotrypsin in cataract surgery. The use of this preparation has simplified the execution of cataract extraction.

The whole of our therapeutics has changed within the last 20 years, by our newly found ability to overcome a great number of infective organisms, by subtly interfering with their intimate metabolism, by Penicillin and other abiotic drugs. Whither biochemical interference with metabolic processes by such substances as Cortisone will lead us, no one can yet tell.

Ophthalmology has left its first century of adolescence and formative period, wherein its main activities have been absorbed in the description and classification of gross disease pictures and is entering into its second century, its adult life. Its goal will be problems of a more fundamental nature, when it can begin to formulate for itself an integrative philo-

sophy based on a knowledge of the first principles of health and disease.

At this point, it will be useful to consider the contribution of our university to the development of this speciality. Few of you may be aware that the first holder of the chair of ophthalmology ever to be instituted was a Maltese professor: Joseph Barth. Born in Valletta in 1745, he studied under Michelangelo Grima, founder of our medical school. Commendatore Smitter noted his genius and took him to Vienna, where along with anatomical studies, he started to practice ophthalmology. Fortunately he had the opportunity of treating Joseph, the son of Empress Maria Theresa, for an eye affliction, and in 1765 she chose Barth as Imperial Oculist and Professor of anatomy, physiology and ophthalmology at the Allgemeine Krankenhaus of Vienna University. He was the first one to start a regular course of lectures on diseases of the eyes. He published a treatise on anatomy and in 1797 he wrote a monograph on "Cataract extraction for the practising surgeon". As he often showed a nostalgic longing for his native land, he was ordered by Emperor Joseph to train two young doctors as specialists in ophthalmology so that Austria would not again be placed in the embarrassing position of having to import foreign experts in this field. He died in Vienna in 1818.

The honour of being the founder of Maltese ophthalmology goes to Professor L. Manchè (1846-1921) who held the first chair of ophthalmology in our University from 1880 to 1907. A student of Mayer, Liebrich and Landers, he contributed numerous articles on the most diverse problems in the speciality. He wrote: "*L'Ottalmologia in quadri sinottici da servire come guida ai Pratici ed agli studenti*". This textbook, translated in German, was used by students all over Europe for a good number of years. In 1881, he represented Great Britain at the International Ophthalmologic Congress. Along with his son, Dr. C. Manchè, father of our Rector Magnificus, he founded the Ophthalmic Institute, where numerous poor patients suffering from Trachoma and other dis-

eases of the eyes were treated gratuitously. The beneficial effect of this philanthropic Institute in the treatment and control of trachoma and prevention of blindness must have been very outstanding.

Mention should be made of my predecessor, Professor L. Preziosi, who in the twenties evolved a modification to the fistulization operation for glaucoma, by employing electrocautery instead of a trephine, thus simplifying the operation and rendering it less prone to complications. This operation is being adopted in various eye clinics in Europe.

At a time when all over Europe and in the United States, Departments of Ophthalmology are being established in all Universities, it was certainly a step backwards when it was decided to change the Chair of Ophthalmology, over 50 years old, into a lectureship.

The blind in Malta do not present us with a great problem. However, until very recently, very little was done for them. A survey I carried out in 1958 shows that in these Islands there are about 638 blind persons. The rate of blindness is 199.06 per 100,000 that is about the same as that obtaining in Great Britain. The main causes of blindness are myopia, cataract, glaucoma, diabetes and trachoma.

Forty years ago, trachoma was the predominant cause of blindness. In a report I published in 1961, the incidence of trachoma in 1958 was found to have fallen to 0.5%. Malta has been the first place in the Mediterranean basin where trachoma has been eradicated. Blindness due to cataract can be remedied by surgery. The same can be said of a good number of cases suffering from myopia. Education of the public can bring under early control most people showing an

intraocular rise of tension. A lot remains to be done in the care of blindness, caused by diabetes mellitus, which in Malta is the cause of 15.9% of blindness. It is to be hoped that the establishment of diabetic clinics, ensuring close cooperation between patient, physician and ophthalmologist will prevent or limit the ocular lesions accompanying this disease.

The first school for the Blind was opened in France about two centuries ago by Valentine Houy. He showed that by skilful training, blind people could become educated and self-supporting citizens. Louis Braille (1809-1852) another Frenchman, gave the blind their system of embossed writing which has now spread all over the world. With the more recent discoveries at his disposal, the modern blind person "can do everything but see".

In Malta, thanks to the efforts of the Education Department, the first Centre for the Blind was founded in 1958. In this place about thirty blind persons are being taught reading, writing and a handicraft. This year, a Society for the Blind was inaugurated. It is hoped that it will consider all problems dealing with the welfare, advancement, registration and employment of blind persons.

Although remarkable progress has been made, in solving eye problems, much remains to be done before the ultimate resources of medicine and science can be applied to the preservation of vision. "For if ever Vision was needed in the world of ours, it is at the present time, when dark forces of ignorance and suspicion, when impenetrable curtains of fear and mistrust cloud the minds and eyes of men."

"Let us open the windows eastwards and shoot our arrows boldly at the Mid-day Sun. We will not hit our target but at least we will shoot higher than he who aims at a lowly bush."