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THE FIRST CHAIR

OF OPHTHALMOLOGY:

a Biographical Sketch of Joseph Barth

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On the 7th April 1818, after a short illness, at the age of 73 years, Professor Joseph Barth, Imperial Councillor, Oculist to His Majesty the Emperor, Professor of sublime Anatomy and Physiology and first Professor of Diseases of the Eyes in the Imperial University, died in Vienna. Well known all over Europe for his ability as teacher and surgeon and for the numerous famous pupils, to whom he was a life long inspiration, his death passed unnoticed in Malta, his native country, and remained so for many years.

Joseph Barth was born in Valletta in 1745. His parents were Nicholas Barth and Maddalena Sceberras. He became a pupil of Professor Michelangelo Grima, Master in Surgery of the Order of St. John in

Malta and member of the Academy of Apathists of Florence. Inspired by his famous teacher, Barth soon showed great interest in the study of anatomy and in its application to Surgery. In order to continue his research work, he proceeded to Rome where he was admitted into the Ospedale Santo Spirito. He never came back to his native land.

It was in Rome that his talent was noticed by Fra Francesco Carlo Von Smitmer, Commendatore of the Order of St. John and Canon of the Metropolitan church in Vienna, who decided to take him to Vienna, where Barth could find all the facilities to study Anatomy and Physiology.

Here, Barth made the acquaintance of Storch who recommended him to Baron Van Swieten from Leyden. The latter had been entrusted by the Empress Maria Theresa with the reorganization of the University and of its medical department, and with laying the foundation of the future world renowned Vienna clinic. Van Swieten, who lost no time in recognizing Barth's talents, enrolled him on the staff of the University and placed him in a good position to start a successful career.

In Vienna, Barth did not devote himself exclusively to dissections. His attention was soon attracted by the number of people suffering from blindness and eye diseases. That at that time the condition of Austrian ocular Surgery was very poor, can be shown by the fact, that in order to operate for cataract on a lady of the Court of the Empress, Baron Wenzel had to be invited to come over from Italy. Much impressed by this state of affairs, the Empress engaged Wenzel to instruct Barth in ocular Surgery.

As luck would have it, some time after, Barth was able to cure of a very painful eye condition the son of Maria Theresa, afterwards Joseph II. In the year 1773 he was asked to occupy the chair of Anatomy and Physiology along with the newly established chair of Ophthalmology. He was also given the title of Oculist to His Majesty and Imperial Councillor.

Of all the operative procedures carried out by Barth as a daily routine, the

only written record is that of Cataract extraction. His methods must have been considered revolutionary. As at that time anaesthesia was not yet introduced, as many as five people were necessary to hold down a patient even for such a short and simple operation as a needling for cataract extraction. He suggested the astonishing idea of operating alone with the patient standing, even backing him against the wall. By means of shouts and threats, he used to crush any sign of opposition or timidity on the part of the patient and reduce him to complete docility. After instructing the patient to pull down the lower lid and look down, he would pull up the upper lid. Then, after tapping the cornea with the back of the blade of the scalpel, thus ascertaining himself of all absence of resistance on the part of the patient, with one quick thrust, he would make a precise incision.

His activity must have been very considerable. In the year 1787, it is recorded that he performed 300 Cataract extractions. The rate of successful operations was 8 cases out of every 12. This is to be considered an excellent performance.

When the Allgemeine Krankenhaus of Vienna was constructed in 1784, two wards were reserved for the treatment of diseases of the eyes and they were placed under the care of Professor Barth. These places have undergone little change since that time. Barth's portrait in oils still hangs, along with those of his successors, on the wall of the office of the second Augen Klinik at present occupied by Professor Hruby.

Barth's lectures and work attracted pupils from all over Europe. Amongst these is to be mentioned Joseph Beer, who as his assistant and successor in the chair of Ophthalmology carried the speciality to unexpected heights. Other pupils were Adam Smith, Bocharke, Quadri of Naples and Magistrati of Milan.

At one time, Barth was at the centre of a controversy which troubled the serene waters of the Viennese Court and Medical world. Along with Von Storch and members of the faculty of medicine, he formed part of a commission entrusted with the

investigation of Messmer's cures in general and the case of the pianist Maria Theresa Von Paradis, in particular. The latter, an infant prodigy and blind since the age of 3, was a daughter of one of the Empress's private secretaries. Her sight was suddenly restored by Messmer. The delegation scoffed at Messmer's methods. They said that the cure was a delusion and if the patient could now see, she had never been blind. Barth further contended that the patient must still be considered blind because she did not know what the objects shown to her were called.

It seems that Barth never quite forgot his native country, for in 1789 though only 44 years old, he manifested his intention of leaving Vienna and retiring to Malta. As the Emperor Joseph II was faced with the loss of his only ophthalmic expert, he made a contract with Barth. The latter would train two doctors in ocular surgery for 1000 guildens a year. The choice fell on a German, Dr. J. A. Schmidt and on Ehrenritter. The latter was the most promising, but he died when very young. It took Schmidt four years to finish his training under Barth and pass the required examination by a special commission of Surgeons and Physicians. Six Cataract extractions had to be successful out of 12. In this way started the first government sponsored training in Ophthalmology. J. A. Schmidt lived long enough to found along with Himly the first journal devoted entirely to Ophthalmology the "*Ophthalmologische Bibliothek*".

The two weak points of Barth seem to have been money and antiques. A story is told by Ernst Fuchs of one occasion, when after treatment of the Empress for an eye condition, the latter said: "Let him take that", pointing to a purse containing his fee on an elegant valuable table. Barth took the Empress at her words, placed the purse and the table under his arm and went away.

In 1791, he was given a pension of 1000 guildens, over and above his ordinary salary. He was thus able to devote most of his time to his life long hobby, that of collecting antiques. His talent in this sector was very well appreciated even by



Portrait of Joseph Barth at the second Augen Klinik, Vienna.

such celebrities as Canova, who was one of his great friends.

It seems that the changes which followed the disappearance from Malta of the Order of St. John dissuaded Barth from returning to pass his last days in the Island where he was born. When he died, his most valuable collection of statues, paintings and cameos was taken over by the Emperor Leopold II.

It is a pity that Barth never cared to put down in writing his public lectures. He published very little. In 1797, his Monograph "Cataract Extraction for the practising surgeon" appeared in Vienna. His other publication "Table of muscles" is the fruit of his accurate dissections.

Barth's greatest and most useful achievement was the establishment of the first University Eye Clinic, where pupils from all over Europe were instructed, trained and encouraged to lay the foundations of similar eye clinics in their own countries.

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THE CAUSES OF TOOTH LOSS

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The great majority of permanent teeth are lost because of dental caries or periodontal disease. Whilst everyone is painfully aware of the consequences of dental caries, the insidious and painless breakdown of the supporting structures of the teeth is accepted as a natural process of ageing. This fatalistic attitude is, however, wrong and recent increased interest in the prevention and treatment of periodontal disease has clearly shown that intelligent management may avoid or considerably

delay the tragedy of edentulousness.

Careful planning of preventive dental health measures must be based on accurate assessment of the factors causing tooth loss. Surveys in many parts of the world have already shown that periodontal disease is of major aetiological importance. This paper reports a pilot study into the causes of tooth loss in patients attending the Dental Department, St. Luke's Hospital, carried out in July 1964.

Materials and methods

A note was made of 500 consecutive dental extractions, under local anaesthesia, from 297 patients (117 males, 180 females). The causes of tooth loss were classified into three main groups, viz: (A) Caries; teeth, including roots, extracted because of complications directly attributable to dental caries. (B) Periodontal disease. (C) Sound teeth extracted for prosthetic or orthodontic reasons.

Results

Table I shows that caries and periodontal diseases are evenly balanced as factors causing tooth loss but when the figures are broken down into those for persons under 30 years and those over 30 years of age, a different pattern emerges (Table II). The increase of periodontal disease as the factor of tooth loss from 3.2 per cent. to 43.4 per cent. is of great practical importance. Indeed, periodontal disease is responsible for the loss of approximately 60 per cent. of teeth extracted from persons over 30 years of age.

Comment

Epidemiological studies in several parts of the world (Pelton et al., 1964; Mehta et al., 1958; Laerouque, 1964 and Jackson, 1965) have shown that periodontal disease becomes the major cause of tooth loss in adults. Valid comparisons are difficult in view of the greatly varied racial, social and economic background of the groups studied. The personnel studied must always be clearly defined. Our results are drawn from a selected group of low income bracket and of mixed rural or