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The JLO Travelling Fellowship

A visit to Professor Mirko Tos, Gentofte University Hospital, Copenhagen

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Neuro-otology and lateral skull base surgery are undergoing rapid expansion and evolution in the UK. As a trainee, I have been developing my sub-specialty interest in otology, neuro-otology and lateral skull base surgery, as these are inter related. Professor Tos has the reputation as one of the great pioneers of otology and neuro-otology. Along with Professor Jens Thompsen from the same department, they treat almost all the patients with vestibular schwannoma in Denmark. Professor Tos is also linked with the development of many otological procedures especially in the management of retraction pockets, adhesions and cholesteatoma, which is still a field of controversy.

Observing Professor Tos one realizes that his approach to otology and neuro-otology is the result of well researched and to great degree of independent thought, he has developed many techniques that are unique. During a period of three months I was able to gain many insights into his practice.

Vestibular schwannoma surgery

Denmark has a population of about 5.5 million. All the patients who are diagnosed as having vestibular schwannoma are first seen and assessed at the Gentofte University Hospital and tumours of greater than three cm are usually referred to the Neurosurgical department at Riggs Hospital. Professors Tos and Thompsen favour the translabyrinthine approach. They operate alone without the co-operation of a neurosurgeon and perform up to two cases per week. Patients who had been initially referred for radiotherapy treatment (in Stockholm) had such poor results (tumour still growing, loss of hearing) that they now advocate surgery rather than radiotherapy. They have operated on more than 1000 cases of vestibular schwannoma.

Otological surgery

Professor Tos uses the on lay technique for myringoplasty except in the case of a posterior perforation where he prefers an underlay. He meticulously removes the squamous epithelial layer of the drum sometimes totally, sometimes as a multiple flaps before applying the graft and stresses the importance of this meticulous removal if implantation of squamous cells is to be avoided.

In Copenhagen virtually all stapes surgery is undertaken under local anaesthesia via the permeatal approach.

Professor Tos operates on almost all patients with cholesteatoma. In case of a small cholesteatoma, he recommends permeatal atticotomy leaving a thinned bridge of outer attic wall, which is very useful when planning the single stage reconstruction. If the cholesteatoma is extensive he prefers a post auricular approach and tries to avoid an open cavity. He never routinely performs 2nd look operations, believing that a thorough removal in his hands rarely leads to recurrence.

I was impressed that Professor Tos still practices on temporal bones as do his senior colleagues. This is an important lesson for all of us.

Every afternoon, a meeting is held in the ENT department, where all the medical staff including Professor Tos, nursing staff from the ward and theatres attend. The doctor responsible for the ward that day presents each case and the patient's management is discussed. This is particularly useful as everyone gets involved in the management of all patients. There is a twice weekly meeting with the radiologists and a monthly meeting with pathologists. Professor Tos has an excellent collection of teaching videos that are available for visiting doctors to see. There is also an opportunity to get involved in a research project which consisted in a modification of the classification of isolated congenital stapes ankylosis and a detailed embryological review to explain the pathogenesis of the ankylosis.

A visit to Copenhagen cannot fail to impress the visitor. The Gentofte University Hospital has an attractive campus, welcoming people and is close to the city of Copenhagen to the south and the beaches to the north.

During my stay in Copenhagen, I had the opportunity to visit Professor Paul Bretlau's ENT department at Riggs Hospital. He has a major Head and Neck Surgery unit and a well equipped vestibular function test centre. I was able to observe a number of head and neck surgical procedures and Professor Bretlau performing stapes surgery using Erbium YAG laser. I also had the opportunity to visit Dr. Per Bonding's ENT department at Glosstrup Hospital in Copenhagen and Professor Mans Magnuson's excellent vestibular function assessment and rehabilitation centre at the Lund University Hospital, Sweden.

This trip has been an invaluable learning experience and I have been taught many new techniques and procedures both as an observer and as assistant. With the Calman training programme, registrars are so 'regionalized'. It is a great pleasure therefore to have the opportunity to learn new skills and meet the great masters in this field.

I wish to thank:

1. Professor Tos and his staff for giving me the opportunity to visit their department, and creating a very friendly environment to work.
2. The JLO for providing the major funding to make this trip possible.
3. Professor Paul Bretlau, Mans Magnuson and Dr. Per Bonding for giving me the opportunity to visit their respective departments.
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5. Royal Society of Medicine and Ethicon for their awards to fund this trip, so that I was not out of pocket.
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