

Book Reviews

COCHLEAR IMPLANTS, NEW PERSPECTIVE

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This book is the proceedings of the third world cochlear implant conference held in Toulouse, France, 2–3 June 1992. Not all the papers read at the conference are represented in the book; the editors Bernard Fraysse and Oliver Deguine have selected those papers of scientific merit which were correctly presented and properly referenced. The resulting 49 have been grouped into 10 sections for the reader's convenience.

William House's introduction makes a remarkable and encouraging statement that amongst over 3,000 cochlear implant patients world wide, there has been, as yet, no report of failure of the VIII nerve. This was one of the gloomier predictions made by neurophysiologists to Bill House when he began electrical stimulation in the early 1970s. It is easy not to forget how great opposition, scepticism and disbelief was, for the pioneers.

The new question is, how best to code the signal. Two good papers in the scientific section illustrate emerging principals. The first, from Melbourne, found that patient's discrimination scores were significantly better if the usual Nucleus 22 electrode excitation pattern was changed to take into account what is known of the frequency map within the cochlea. Three kilohertz was chosen and the electrode nearest this region programmed to receive 3 kHz information. The rest of the frequencies were spread among the more apical and more distal electrodes. A musician will tell you that playing music 'as written' is much easier than transposing the frequencies up and down the piano keyboard but it is pleasing to have this appealing notion verified by experiment. The second paper, from Zurich, neatly demonstrates the strengths and weaknesses of a coding system driven by the laryngeal voicing frequency (called the Voice Pitch Excited Sampler) and that where the samples of the sound signal were delivered many times to the electrode at a very rapid rate (Continuous Interleaved Sampler System). The former is good for discrimination of vowels, fair for the discrimination of consonants and good for discrimination of voice. The latter was good for vowels and consonants but gave no information about voicing frequency and consequently the wearer could not tell, without looking, whether the speaker was a man, woman or child.

The important matter of predicting who will benefit from a cochlear implant is addressed in three papers, respectively by Deguine, Lehnhardt and Gantz and it was interesting to see

what common ground there was in their great experience. Poor prognostic factors were a high proportion of the patient's life spent deaf and poor experience and memory for spoken language. Poor results from brain stem evoked responses by electrical stimulation and round window or promontory tests were not predictive of a poor result and these tests were thought to have little value for this purpose. The number of electrodes giving sensation of sound when activated correlated with a good result. However, it is more useful to know before the operation who will do well and it was surprising that none of these authors addressed the predictive value of CT scan pre-operatively. Lehnhardt correlated aetiology with results which were good with viral acquired deafness and with head trauma providing the cochlea was not fractured. A moderate result was obtained in cases of meningitis, otosclerosis and trauma with cochlear fracture but a poor result with congenital cases. Lastly, Gantz observed there was no difference in the results in 48 patients between the 22 channel Nucleus device and the 4 channel Ineraid device, but that psychological variables like self confidence and preparedness to engage in conversation and maintain eye contact was a significant factor in post-operative performance.

The adolescent group was examined by Chute who concluded that the overall results of cochlear implants in the teenage population appeared to be similar to pre and perilinguistically deafened adults. Test scores were in general disappointing.

The scientific papers include the effects of implants on tinnitus, the possibilities of sound localization with an implant, implantation in the deaf blind, difficulties and complications with obliterated cochleas and the results in pre and postlingually deafened children. The ethics of implantation in children are also discussed in this nicely balanced and comprehensive collection of papers. The editors and co-editors are to be congratulated on the book and a copy is recommended to all who are doing cochlear implant work or those who regularly see patients in need of referral.

Roger F. Gray F.R.C.S.

NEOPLASMS OF THE LARYNX

Alfio Ferlito. Churchill Livingstone: Edinburgh.
1993, Hardback.

Price: £120. Pp 634. Illus.346.

This is a sumptuous book, describing in great detail numerous aspects of laryngeal neoplasia. Following a fascinating set of introductory chapters on history, embryology, epidemiology and prevention, the main portion of the text (300 pages) is devoted to a description of surgical pathology of all types

of neoplasm involving the larynx. Squamous carcinoma, in particular, is fully described, together with its precursors and occasional relationship to recurrent papillomas: there is a clear account of the anatomic pathways by which carcinoma penetrates the cartilaginous skeleton to invade perilaryngeal soft tissues. Following a chapter on diagnostic imaging, there is a fine review of operative planning and technique, supplemented by abundant cutaway drawings subsequent to which there is full discussion of laser treatment, radiotherapy and chemotherapy. The final chapters describe prognostic factors, rehabilitation and follow up.

Perhaps further editions will expand the description of imaging methods of displaying the extent of tumour involvement into the larynx, and reduce the turgid chapter on methods of documentation. Photographs are abundant and excellent, whilst typographical errors are rare: references are comprehensive, up to and including 1991.

The reviewer unhesitatingly recommends this book to all those involved in laryngeal carcinoma practice.

B. T. B. Manners.