

What a surgeon starts, the rehabilitation team must finish*

Major topics of the European Symposium on Paediatric Cochlear Implantation – ESPCI 2009

The 9th ESPCI was organized in Eastern Europe for the first time. Giving this possibility to Poland, to the Institute of Physiology and Pathology of Hearing – was the evidence of appreciation of the achievements and successes of Polish scientists by the international scientific community.

The 9th ESPCI was devoted to the newest technologies in auditory implants which were introduced at the turn of the 20th century. Undoubtedly, it was an outstanding scientific event in this field of medical science and gathered the most prominent specialists, not only from Europe, but also from the United States, the Middle East, Asia, Australia and many other countries. The results of debates and new standards expected to be set at the conference, have anxiously been awaited by clinicians and patients with partial and total deafness. The programs of early detection and treatment of hearing impairments (hearing screening of newborns, early diagnosis and rehabilitation) implemented in clinical practice in a growing number of European countries have resulted in increasing application of cochlear implants in children. Therefore, the exchange of scientific experience is of paramount importance. It has been dynamically developing and sets the grounds for progress in audiology and otolaryngology.

The cochlear implant system produced by Cochlear Company with a new atraumatic electrode designed and built according to Professor H. Skarżyński's guidelines had been introduced during the Congress. The effects of clinical examinations of the first 20 patients were presented. They proved high effectiveness of the electrode which allows for main-



taining the sensitivity of hearing at the level that had existed before implantation. Duet 2 – a sound processor produced by Med-El Company, had its world premiere at the Congress as well. Dr. Artur Lorens from the Institute of Physiology and Pathology of Hearing has presented the results of the clinical trials of the new speech processor which, thanks to the combination of the newest technologies, will enable patients to benefit from better hearing including perception of music.

Treatment of partial deafness, which is commonly recognized as Polish specialization, was one of the main topics of the Congress. A few sessions and a special surgical workshop were devoted to this topic, including live transmission from the operating room, showing a safe method a cochlear implant electrode introduction into the inner ear through the round window. This safe method has been elaborated by Prof. Henryk Skarżyński. The concept and implantation method has drawn great attention of scientists and clinicians due to the fact, that applying cochlear implants many more patients can be treated than so far. In the opening lecture, Prof. Henryk Skarżyński presented a new strategy for treatment of partial deafness developed based on more than 2500 cochlear implan-

tations over 18 years of experience, showing results of long term observations in particular modes of treatment.

In the invited lecture, Prof. Blake Wilson reviewed briefly the experience to date with combined electric and acoustic stimulation of the auditory system in patients with partial deafness. He described the results that had been obtained with the combination in patients with partial deafness implanted at the Institute of Physiology and Pathology of Hearing in Poland.

For the first time in the history of the ESPCI, many scientific sessions were devoted to education and rehabilitation of patients provided with cochlear implants. Prof. Leo De Raeve delivered the second opening lec-



ture on these subjects. It concerned the great importance of postoperative care of implan-

ted patients as a multidisciplinary task. Quoting Prof. Sue Archbold: "What a surgeon starts, a rehabilitation team must finish". Prof. S. Archbold represented the Cochlear Centre in Nottingham, one of the largest in Europe, where the series of ESPCI was initiated. She chaired a round table session with clinicians and scientists from all leading European centers. Prof. L. De Raeve dealt with some vital challenges for rehabilitating teams and educators, which concerned implantations as early as in six months old infants. Prof. Jan Helms, the Congress Guest of Honor, Invited Speaker, delivered a lecture dealing in detail with bilateral implantation. The medical centre in Würzburg, which Prof. J. Helms had headed for many years, was the first in Europe to start bilateral cochlear implantations program on a large scale.

"Bridge over troubled waters" – the title of a song by Simon and Garfunkel duet was an inspiration of another Invited Lecture by Prof. Frans Coninx from Solingen. It is the cochlear implant that constitutes a bridge which links the two worlds – the world of silence with the world of sound.

Before cochlear implants were introduced into clinical practice, the

hearing impaired patients' world had been dominated by sign language. Presently, an implant

The following were other most important issues discussed during the Congress:

- Early detection of congenital hearing impairments in children,
- Methods of early detection and diagnosis,
- Present selection criteria for children to provide particular types of auditory implants,
- Rehabilitation of children with various types of auditory implants.
- Treatment of hearing impairments providing cochlear and other auditory implants,
- Safe otosurgical techniques in cochlear implantations,
- Application of robots to assist otosurgeons,
- New ways of the middle ear stimulation
- Bilateral implantation,
- Bimodal stimulation ~ acoustic and electrical,
- Middle ear implants,
- Auditory Brain stem Implants,
- Modern intra-cochlear methods,
- Modern imaging techniques applied in cochlear implantations.
- Application of objective methods in the process of children selection criteria for auditory implantations, intra-operative examinations and at the stage of setting stimulation parameters of an implant (cochlear implants fitting).
- Evaluation of the quality of life of children provided with cochlear implants,
- Psychological aspects of auditory implants application,
- Educational problems of children provided with cochlear implants,
- Education of specialists in application of auditory implants.

makes verbal communication possible (speech and language can be developed). Prof. Thomas Lenarz, the Head of the Clinic in Hannover, presented the latest achievements in the middle ear implant applications. Until recently, these devices have been an alternative for conventional hearing prostheses for specific groups of patients with mixed hearing loss. A multi-centre team from Hannover – presented a very interesting concept of stimulating cochlear with impulses of photons. It is a very intriguing concept because it makes possible to stimulate endings of the acoustic nerve without interference into the inner ear, which is vital in case of sensorineural hearing loss.

*Professor Sue Archbold

THE 9TH EUROPEAN SYMPOSIUM ON PAEDIATRIC COCHLEAR IMPLANTATION

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