

## HISTORICAL REVIEW

When talking or writing about deafness as a serious health problem faced by the people with hearing or speech impairments that can occur in early childhood or later in life, Ludwig van Beethoven (1770-1827) is frequently chosen as an example. Beethoven lost hearing as an already renowned and recognized musician, some ten years before his death. He continued writing music as a deaf man, as Richard Wagner put it figuratively when writing about Beethoven: "His outer world has died out, perhaps not because blindness deprived him of perceiving it but because that world was kept far from his ear by deafness"<sup>1</sup>. We can only guess how many deaf people have been alienated from the world of the hearing ones, and how deeply they and their families have suffered for it throughout the history of mankind. Initial attempts at solving this socially highly relevant issue date from the 18<sup>th</sup> century, when the sign language was developed by Abbé de L'Epée, down to the 20<sup>th</sup> century, when achievements in medicine and medical technology in particular have enabled introduction of novel operative methods. Among these, mention should be made of artificial cochlea implants, offering the best rehabilitation of hearing and speech for children and adults with hearing loss.

In Croatia, the first artificial cochlea was implanted twenty years ago at our Clinical Department of Otorhinolaryngology. In 1996, artificial cochlea was implanted in an adult patient and in 1997 in a pediatric patient. Two years later, in 1999, the procedure of hearing implant in the brain stem was performed by a neurosurgeon from our Clinical Department of Neurosurgery in collaboration with a German neurosurgeon and a brain monitoring expert from the Clinical Department of Neurosurgery, Zagreb University Hospital Center. Bilateral artificial cochlea was implanted in 2000, known to be rarely performed in other well-known centers. A total of 458 artificial cochleae have been implanted to date, which together with other significant procedures successfully performed at our Clinical Department of ENT, Head and Neck Surgery led to our Department being appointed Referral Center for Hearing Loss and Deafness Surgery of the Ministry of Health, Republic of Croatia, as one of the largest centers for artificial cochlea implants in Europe.



All these achievements were possible primarily owing to the good working strategy at our Clinical Department of ENT, Head and Neck Surgery. In addition to excellent surgeons and anesthesiologists, patient selection was made in collaboration with Suvag Polyclinic, in line with more than 50-year cooperation of these two institutions. Some preoperative and postoperative testing, as well as hearing and speech rehabilitation are performed at Suvag Polyclinic. Besides these professional activities, social campaigns were launched that enabled purchase of artificial hearing implants and informed the whole community about the role of such excellent medical procedures in the world of deafness. In 2001, 30 artificial cochleae intended for war veterans' children were purchased by joint action of the Ministry of War Veterans and Ministry of Health, named *Anamarija in the World of Sounds*. Great success of this initial campaign inspired a new one, conducted all over Croatia, named *Let's Make Them Hear*, which also proved very successful. In addition to all the efforts invested by the physicians and other professionals involved, it should be noted that all deaf persons on their way from deafness to entering the world of sounds have a long and arduous road to go together with their families; however, let me quote Beethoven again: "To joy through suffering"<sup>2</sup>.

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### References

1. Wagner R. Beethoven. In: Rolland Romani. Beethoven. Zagreb: Biblioteka lijepe knjige, 1940; p. 27. (in Croatian)
2. Wagner R. Beethoven. In: Rolland Romani. Beethoven. Zagreb: Biblioteka lijepe knjige, 1940; p. 123. (in Croatian)