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[The evolution of surgical interventions for cochlear implantation at the Russian Research and Practical Centre of Audiology and Hearing Rehabilitation].

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Abstract: The objective of the present study was to estimate and analyse the effectiveness and labour intensity of the methods of surgical intervention for cochlear implantation. The analysis of the surgical stage of cochlear implantation was based on the examination of 2073 children and adults during the period from 1991 to 2013. The age of the patients varied between 6 months to 71 years. The cause of deafness was meningitis and an injury in 11% and 6% of the patients respectively. The cochlear implants from Advanced Bionics were inserted in 495 patients, those from Med-El in 9 ones , and from Neurelec in 20, and Nucleus devices from Cochlear in the remaining patents (n=1549) including 37 double-array electrodes and a Hybrid implant for electroacoustic correction of hearing . The implants with a straight and perimodiolar electrode were placed in a roughly equal number of the patients. The rationale for the performance of selected components of the surgical stage of cochlear implantation was developed along with the technical procedures for the purpose applied at this Centre since 1991. The original methods for the fixation and covering of the receiver-stimulator and also for the choice of the place of the electrode array insertion into the cochlea are described. They allowed to significantly decrease the frequency of complications, duration and extent of the surgical intervention as well as to reduce to a minimum post-operative manipulations.

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