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Paediatric Cochlear Implantation in the First and in the Second Year of Life: a Comparative Study

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Background: Successful outcomes of cochlear implantation in children have led to a gradual reduction in the age at which implantation is performed. Now that newborn hearing screening (NHS) and a reliable audiological diagnostic procedure are well established, the question has been raised as to whether implantation before the age of 1 is effective and safe.
Material and method: The study included 27 children implanted before the age of 1 (group 1) and 89 children implanted between the ages of 1 and 2 (group 2). Patient-related data were analysed with respect to individual anamnesis, implantation, rehabilitation and speech understanding.
Results: Irrespective of the children's age, the incidence of surgical or anaesthesiological complications did not increase. After two years, group 1 demonstrated better results in terms of development of hearing and speech understanding. These results correlated more closely with the children's actual age than with the length of time in rehabilitation.
Conclusion: This study revealed that children implanted before the age of 1 were subjected to no additional risks and showed superior development of speech understanding. Cochlear implantation should therefore be performed in very young children identified as suffering from profound bilateral hearing loss.