

# Wartość wielorzędowej tomografii komputerowej w wykrywaniu wad wrodzonych ucha wewnętrznego oraz przydatność metody w klinicznej kwalifikacji do implantacji

Value of multidetector computed tomography in detection of congenital inner ear malformations and its usefulness in qualification for cochlear implantation

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## Summary

**Aim.** The aim of the study was retrospective review of multidetector computed tomography (MDCT) findings in group of patient with suspected congenital inner ear malformation and comparison of CT reports with the data concerning qualification for cochlear implantation, electrode choice and surgical technique modification. **Material and method.** 40 subjects, aged from 18 months to 32 years, with suspected inner ear malformation, underwent MDCT in protocol for temporal bone assessment as a part of preoperative assessment before cochlear implantation. CT results were compared with the data concerning qualification for implantation, electrode choice, ear choice and possible technique modification. **Results.** Normal CT scan were found in 18 subjects. Bilateral Michel deformity was found in 1 patient, bilateral cochlear aplasia in 1 case, common cavity in 1 case. One side cochlear hypoplasia with the cochlear aplasia was found in 1 case. Bilateral cochlear hypoplasia was found in 2 cases, bilateral incomplete partition type I in 2 cases, bilateral incomplete partition type II in 4 cases, bilateral large vestibular aqueduct without notable malformation of the cochlea in 2 cases. Various malformations of semicircular canals without notable malformations of the cochlea were found in 8 cases. MDCT affected ear choice in 6. In 2 cases decision of implantation was cancelled. In 1 case two stage procedure was conducted. **Conclusions.** MDCT is valuable method in diagnosing inner ear malformations. It is an essential part of preoperative assessment as its results affect decision of implantation, ear choice, and possible procedure modification.