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The effect of endolymphatic shunt surgery on macula and crista function

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Background:
Endolymphatic shunt surgery (ESS) is a hearing preserving surgical treatment option for patients with Meniere's disease refractory to medical management. Treatment effectiveness of ESS is under discussion. Therefore the sacculus and the lateral semicircular canal functions were investigated in patients with ESS.

Methods:
In 23 patients with unilateral Meniere's disease (AAO-HNS) who were treated by ESS caloric reactions in prone and supine position and vestibular evoked myogenic potentials were investigated before and after surgery. Pre- and postoperative findings were compared.

Results:
74% (n=17) of the patients did not show changes of the caloric reaction in prone and supine position. An improved crista response was seen in 8% (n=2) of the patients and a functional impairment was noticed in 17% (n=4). In all measurements of vestibular evoked myogenic potentials no recovery of sacculus dysfunction was recorded postoperatively.

Conclusion:
ESS does not have an effect on the crista function of the lateral semicircular canal and on the sacculus function. Contrarily, two-thirds of the patients who received an ESS show a subjective improvement of their complaints. Compared to other surgical options for patients with Meniere's disease refractory to medical management ESS should be favored since it is a hearing preserving procedure with low surgical morbidity. The mechanism responsible for resolving the symptoms of Meniere's disease needs be studied.

Literatur:

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