Choanal atresia; results of endonasal surgery and cephalometric evaluation of midfacial growth

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Between 1972 and 1993, 42 patients were seen with choanal atresia at the Sophia's Childrens Hospital (22 bilateral, 20 unilateral). Fifty per cent (21/42) of patients had associated congenital anomalies (e.g. CHARGE-association [9/42]). Overall 53 operations were performed on 35 patients (with resection of the posterior part of the vomer). Following nasal surgery silicon stents were left in situ for 61 days on average. After 3 weeks stents were changed and inspection was done under general anaesthesia. The initial success rate was 64% (21/33). The final success rate after an average follow-up of 6 years and 10 months is 94% (33/35). For cephalometric evaluation of facial relationships, digital tracings were performed on lateral radiographs. Significant differences in outgrowth were not found before the growth spurt, in comparison to the control group. After the growth spurt, a shorter maxilla in a sagittal dimension (anterior nasal spine–posterior nasal spine; \( P = 0.002 \)) and in a vertical dimension (nasion–anterior nasal spine; \( P = 0.022 \)) was documented.

Epidermal differentiation in the external ear canal and on the tympanic membrane


The epidermis of the tympanic membrane and in the adjacent osseous part of the external ear canal is very thin and devoid of adnexae. Accumulation of desquamation products is prevented because keratinocytes from these areas migrate towards the external meatus where they desquamate. The nature of this process is not entirely understood but seems to be related to differentiation in these cells. In this immunohistochemical study differentiation in the various parts of the external ear canal and tympanic membrane epidermis was studied using cytokeratin (Ck) expression as a parameter. In the cartilaginous part the epidermis showed a normal skin pattern of cytokeratin expression. In the osseous part and on the tympanic membrane the additional expression of Ck 19 and the hyperproliferation associated Cks 6, 16 and 17 were seen. This indicates the coexistence of two differentiation pathways in deep meatal skin. In normal skin the expression of Cks 6, 16 and 17 is only seen in hyperproliferation associated conditions. However in the external ear canal their presence cannot be explained from such a state. Because keratinocytes showing hyperproliferation associated markers have the ability to migrate, their presence in the deep meatal skin may be related to the peculiar migration process in this region.

Quantification of macula function

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In the dark, in healthy subjects torsional eye movements occur upon lateroflexion, eccentric rotation and during translational acceleration and are assumed to be associated with the function of the maculae (orientation relative to the gravitation vector). Using specially made real-time video-eyetracker, stimulation and analysis equipment, these torsional eye movements can now be quantified clinically to study the function of this inaccessible area of vestibular function. In patients with a typical benign paroxysmal nystagmus and a normal standard ENG (spontaneous, fixation, smooth pursuit, saccades, optokinetics, SHAT, high frequency headshaker and caloric) strong indications were found for abnormal function of the maculae. Hyporeflexia and areflexia were also found in patients with a history of spontaneous vertigo and a normal standard ENG and in victims of non-contact acceleration-deceleration trauma.

Suboccipital surgery for acoustic neuroma

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A retrospective study was done on 106 consecutive patients with an acoustic neuroma who underwent suboccipital surgery. They were operated upon between 1980 and 1992, and complete follow-up data were available for all patients. The results of surgery were compared to those at other centres where the same surgical approach was used, and also to the results of other approaches used in Nijmegen and elsewhere. Incomplete removal of the tumours was done in preference to...