

# Pathology of Selected Lesions of the Ear

External and Middle Ear - Ann Sandison, Imperial College Healthcare NHS Trust, Charing Cross Campus

Diagnostic surgical biopsies of external and middle ear lesions are relatively infrequently carried out, but pathologists should be aware of perilous lesions in which misdiagnosis can have disastrous results for the patient. Squamous carcinoma of the external ear usually presents little diagnostic problem when it presents on the pinna. Presentation in the external ear canal may, however, be difficult to recognise by both clinician and pathologist not only because the tumour lies deeply but also because of the atypical microscopic morphology that it often displays. Careful gross examination and sampling of surgical margins must also be carried out on the therapeutic surgical excision coming from these carcinomas. Chronic otitis media and its complication, acquired cholesteatoma are very common diseases but biopsies seldom reach the pathologist except for the aural polyp. Glandular tissue is usually seen in middle ear biopsies as the common metaplastic epithelial change of otitis media. Adenoma of the middle ear, although the commonest middle ear neoplasm, is unusual. It *always* shows neuroendocrine characteristics, however, and this feature does not denote any particular hyperplastic or atypical propensity [1]. Paragangliomas are rare and usually present as middle ear tumours; only imaging can distinguish the invasive jugular form from that confined to the middle ear. Histological presentation of a carotid body-like neoplasm is characteristic of both forms. Meningioma of the middle ear show similar appearances to the common intracranial lesions.

Inner Ear - Leslie Michaels, University College London

Metastatic neoplasms derived from extra-aural primaries are probably the most frequent tumours of the inner ear. The common schwannoma of the vestibular nerve usually does not require biopsy diagnosis before surgery is carried out. Sometimes, however, the pathologist is called on to exclude by frozen section a lipoma in the same situation; these often contain important nerve branches which should not be resected. Endolymphatic sac carcinoma [2] is a rare slowly-growing neoplasm which may reach the middle ear before diagnosis. It may be histologically confused with metastatic papillary carcinoma of the thyroid because it shows both papillary and follicular epithelial elements. Genetically based ear diseases are a common cause of deafness, but some 80% of them show little or no structural lesions. Pendred syndrome, in which thyroid goitre is also frequently present, is an example of such a condition in which striking lesions of the inner ear, notably marked dilatation of the endolymphatic duct and sac are present. Otosclerosis is a common lesion of the inner ear causing conductive deafness, in which autopsy changes suggestive of an osseous neoplasm have been identified [3]. In another frequent malady of the inner ear, Meniere's disease, an origin in the bony otic capsule which might lead to the characteristic endolymphatic hydrops has been recently identified [4].

## References

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