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**Morpho-functional Partition of the Middle Ear Cleft**

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The middle ear cleft consists of the tympanic cavity and the mastoid gas cells system, which are connected to each other, and in which gas circulates and undergoes more or less important exchanges. These cavities have specific characteristics leading to particular function. We will show that the middle ear cleft is divided into two main parts by means of a true inter- attico- tympanic diaphragm, which separates the two parts by morphology as well as function. The antero-inferior compartment, situated under the diaphragm, includes the pro-, meso- and hypo-tympanum. It is covered by secretory, or non secretory, ciliated cells, usually with a muco-ciliary clearance function. It consists of a less rigid chamber because of the presence of the drum. Thanks to the fibrocartilaginous eustachian tube, it opens in an intermittently ventilated gas pocket. It communicates with the superior compartment by both of the two previously mentioned openings. It is probably the site of predilection of secondary bacterial infections from the rhinopharynx. An inflammatory process involving the mucosa of the antero-inferior middle ear compartment leads to muco-ciliary clearance problems, and to the accumulation of mucous, which could generate, among other things, serous or sero-mucous otitis. Additional infection is possible. A rare consequence could be tympanosclerosis. The postero-superior compartment, situated above the diaphragm, includes the epi- and retro-tympanum, aditus ad antrum, antrum and mastoid gas cell system. It is covered by a richly vascularised cuboidal epithelium, mainly devoted to gas exchange. It consists of a rigid chamber, and an open, non ventilated gas-pocket which communicates with the inferior compartment by way of both openings. It is probably the site of predilection of viral haematogenous infections. An inflammatory process involving the mucosa of the postero-superior middle ear compartment, causes problems in the exchange of gas, leading to the development of a tympanic membrane retraction pocket, which could eventually deteriorate into cholesteatoma.