TYMPANOSCLEROSIS
Tympanosclerosis. Trans-tympanic histology of the pathology showing calcific plaques in the pars tensa.
Histology of a thick tympanosclerotic plaque from the middle ear of a longstanding COM case. Masses of calcified proteinaceous plaque with some $2^0$ ossification.
Plaques of tympanosclerosis secondary to past AOM or OME. Deafness unlikely. Common after vent tube insertions.
Isolated plaques of tympanosclerosis. Insignificant, but accompanied by OME, causing a conductive loss.

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Plaque of tympanosclerosis in the Rt. posterior pars tensa. Usually not clinically significant. Serous OME present.
Classic “horseshoe” tympanosclerosis. Drum aerated, no hearing loss present. History of AOM.
Moderately extensive pars tensa pattern tympanosclerosis secondary to repeated OME. An atrophic depression anteriorly results from a Shepard pattern vent tube.
Horseshoe pattern tympanosclerosis. The depression in the anterior drum has resulted from a longer term Collar Button pattern vent tube. The middle ear is aerated.
Subtotal tympanosclerotic pars tensa calcification. The ear is aerated but if substantial conductive deafness is present, removal of the plaque, myringoplasty +/- ossiculoplasty may be required.
Total pars tensa tympanosclerosis. Shah mini vent tube in situ. A degree of conductive loss is likely, given the extent of calcification and likely chronic OME previously.
Total pars tensa tympanosclerosis, sparing only the pars flaccida of a large attic pocket.
Heavily tympanosclerotic drum with a posterosuperior atrophic quarter. The long process of the incus has necrosed; substantial deafness is probable.
Diffusely atrophic and tympanosclerotic pars tensa due to longstanding paediatric OME. The middle ear remains well aerated. Possible loss of the stapes superstructure.
Mild antero-inferior pars tensa tympanosclerosis and some postero-superior drum retraction. Tubal insufficiency in remission, middle ear well aerated.
Heavily tympanosclerotic drum with a larger antero-inferior perforation, probably due to an atrophic drum breakdown, secondary to prior vent tube insertion.
Anterior drum calcification with a posterior large perforation, due to breakdown of a retracted and atrophic drum secondary to chronic tubal insufficiency.
Thick tympanosclerotic plaques in a diffusely otherwise atrophic pars tensa. Burnt-out tubal insufficiency, possible chain fixation.
A large calcific plaque in the anterosuperior pars tensa, enveloping the handle of the malleus, probably fixing same, causing conductive loss. Middle ear aerated.
Heavily tympanosclerotic drum, severe retraction of the malleus, atrophic and perforated inferior pars tensa. Probable chain fixation, possibly stapedial.
A heavily tympanosclerotic and perforated drum. The thick calcific bosses on the posterior scutum suggest similar middle ear mucosal involvement and chain fixation.
Markedly calcific pars tensa with tympanosclerotic changes in the middle ear mucosa visible via the large posterior perforation.
A large perforation in a heavily tympanosclerotic drum. Plaques are visible on the stapes head and below the round window. The malleus is fixed to the scutum superiorly.
Severe, very thick drum calcification, with a mass of plaque connecting the handle of the malleus and the head of the stapes, visible via the irregular perforation.
Obliterative tympanosclerosis. The drum is diffusely thickened and calcific, with a mass of plaque enveloping the stapes and its surrounds.
Gross calcification of the drum with evidence of past pars tensa collapse. Advancing plaque has filled the posterior mesotympanum, coating the stapes.
Advanced Stage 3 adhesive otitis and tympanosclerosis. Gross drum collapse and loss of the incus long process and stapes superstructure, but the ear remains aerated.
Stage 3* adhesive otitis with severe posterior (intact) drum collapse and masses of calcified nodules fixing the stapes and malleus handle. A concurrent effusion persists.
Substantial drum collapse and loss of the stapes arch. The drum is heavily tympanosclerotic and calcified nodules are evident along the facial nerve. Stage 3 adhesive otitis.
Obliterative tympanosclerosis, heavily calcifying the drum remnants. The chain is intact but invested by advanced plaque formation. Stage 4, 60db conductive deafness.
Stage 4 cholesteatomatous adhesive otitis complicating a heavily tympanosclerotic drum. Silvery keratin masses fill the postero-superior middle ear, extending into the attic.