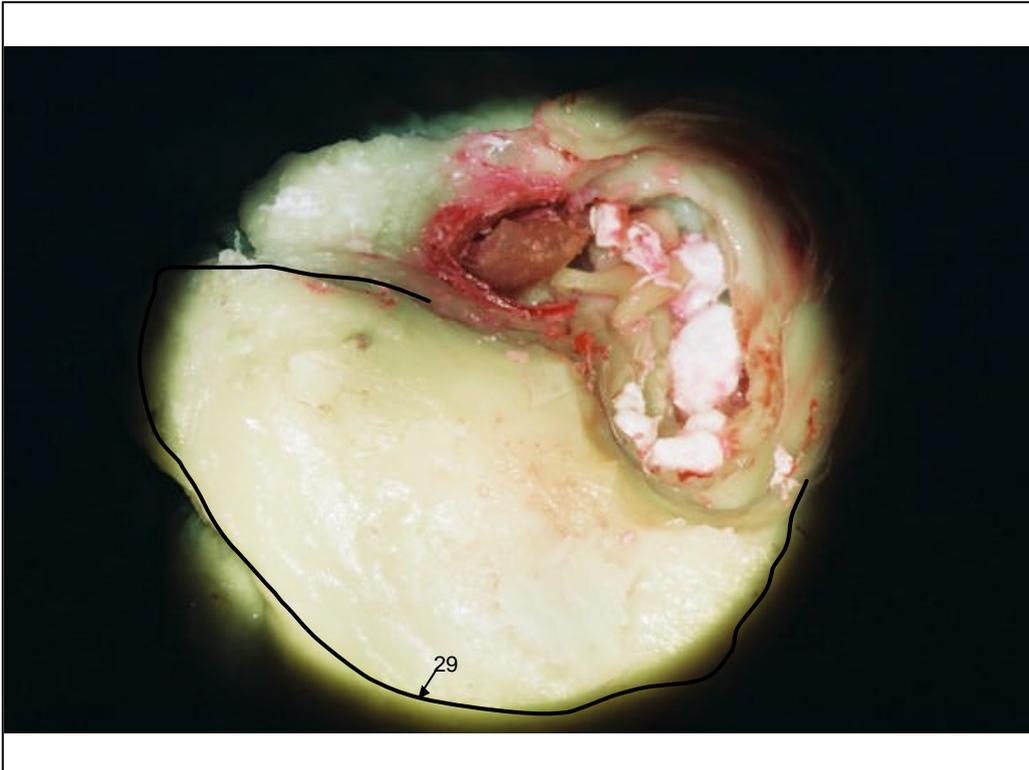


# Modified radical mastoidectomy



### **29** Extent of cortical bone removal

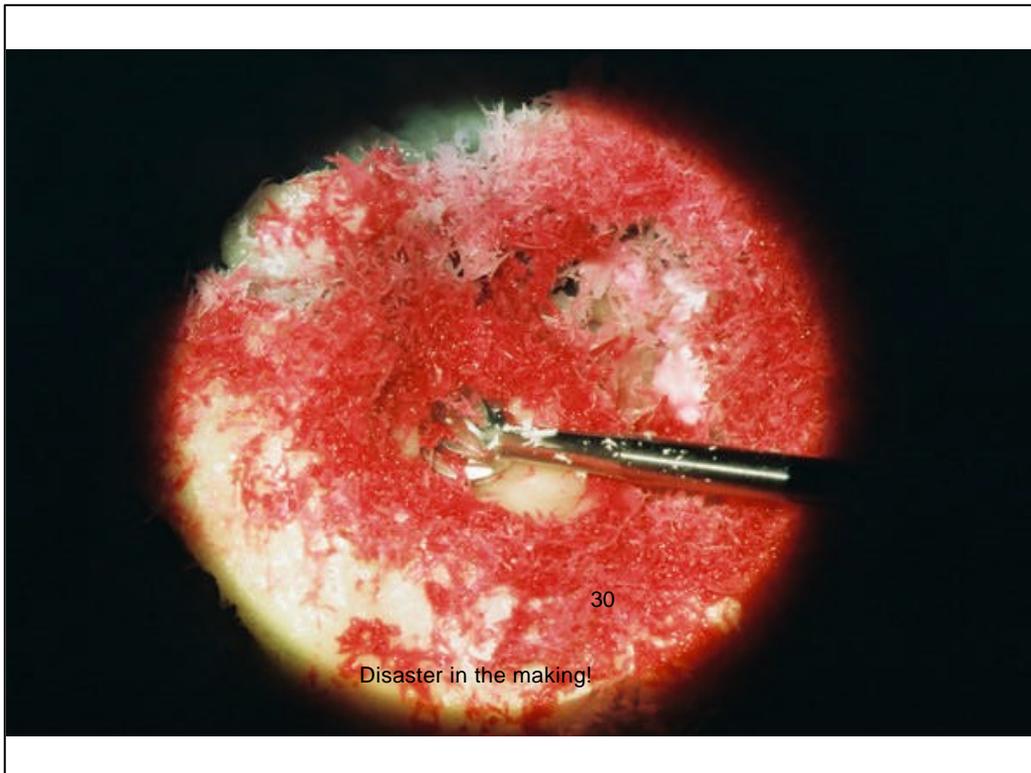
Continue with the 5.5mm bur removing bone with some confidence in the knowledge that all the vital structures can be seen except the sigmoid sinus.

### **Modified Radical Mastoidectomy**

Take a 5.5mm bur and remove mastoid air cells to the tip of the mastoid. Define the sigmoid sinus, the sigmoid angle, middle fossa plate, remove the posterior wall of the EAC as far inferiorly as the floor and as far medially as the annulus. Make a smooth walled cavity with no recesses where keratin debris can accumulate, become macerated and start the ear discharging again. An ideal cavity should be shaped like an "inverted truncated cone".

Always keep your operative field clear of bone dust otherwise you will lose your landmarks and do something you regret.

If the cholesteatoma extends inferiorly through the central mastoid tract be aware that it might be near the vertical part of the facial nerve.



**Disaster in the making!**

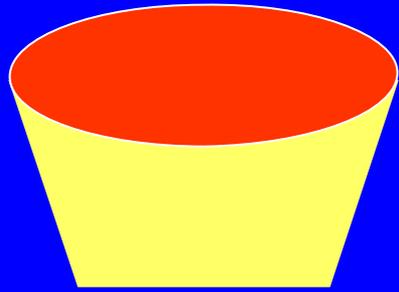
**30.** Bone dust obscuring landmarks and increasing the chances of harm being done to the patient.

You must spend time sucking away bone dust and keeping all your landmarks in clear view, you need them all.

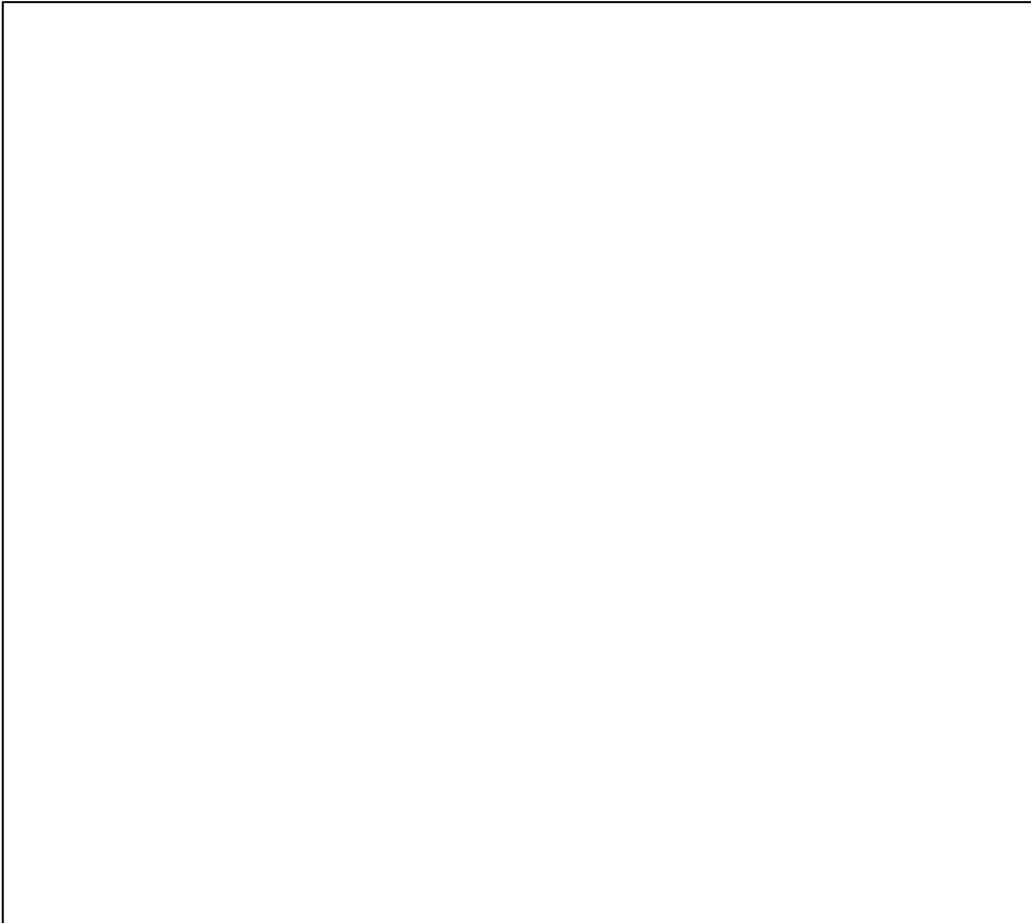


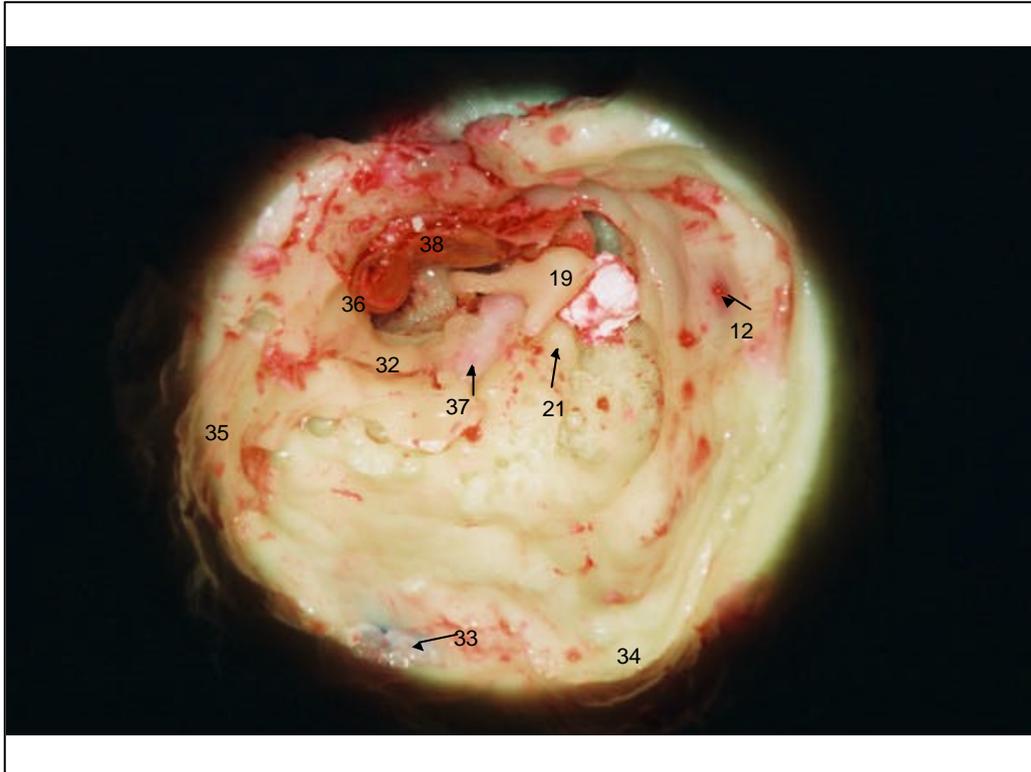
**31** Cholesteatoma in central mastoid tract. **32** Facial ridge. **33** Sigmoid sinus

Having done most of the bone work, now finish off the cavity and removed the cholesteatoma as final act. The cholesteatoma extends medial to the ossicles and thus the the incus and head of the malleus must be removed in order to gain access to the cholesteatoma. The ossicles (if present) provide landmarks which should not be removed until the very last.



An inverted truncated  
cone





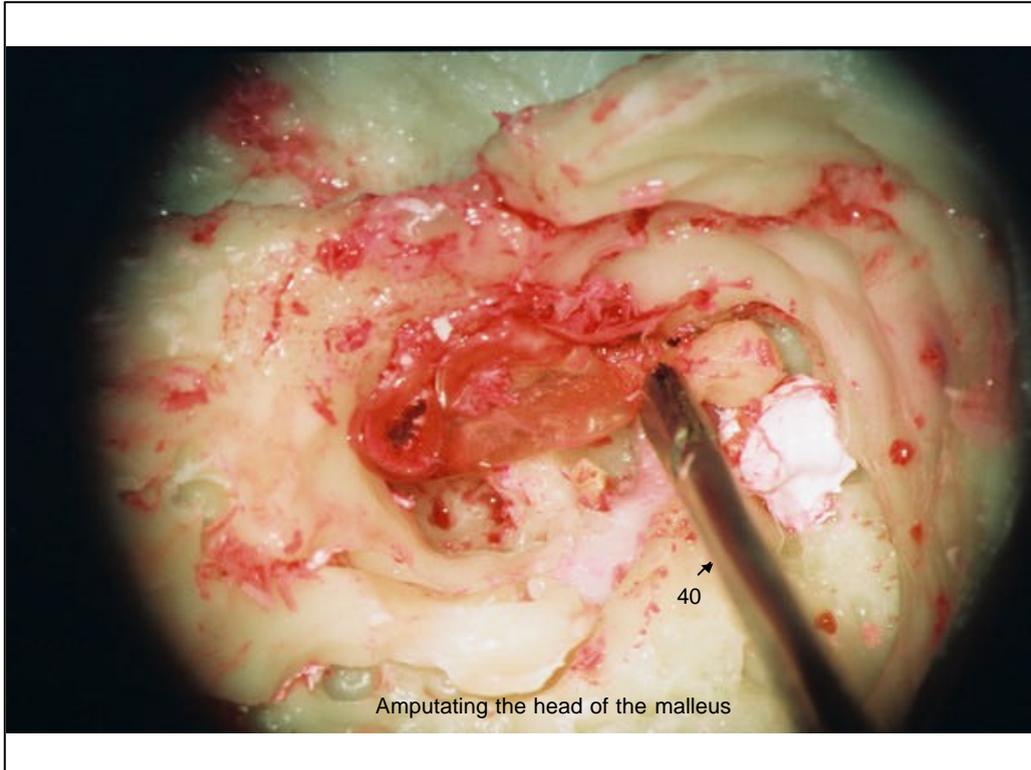
12 Middle fossa plate. 19 Body of incus. 21 Lateral semicircular canal. 33 Sigmoid sinus. 34 Sinodural angle. 35 Mastoid tip. 36 Floor of external auditory canal. 37 Lateral semicircular canal. 38 Skin flap from EAC.



**39** Forward hook.

### **Disarticulating the incudo-stapedial joint**

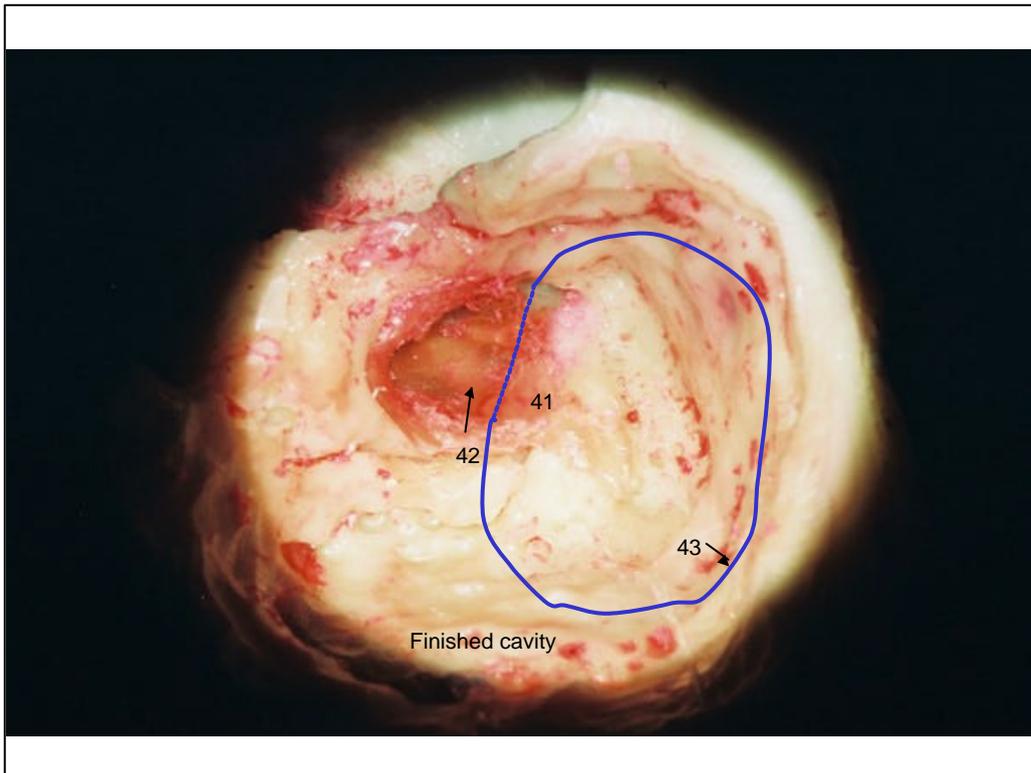
You should never remove an incus without making sure the incus is not still connected to the stapes, otherwise you may pull out the stapes and give the patient a dead ear and severe vertigo. Take care not to harm the stapes when you are disrupting the joint. Now disrupt the malleolar-incudal joint and remove the incus. Amputate the head of the malleus with House-Dieter malleus nippers. Remove the last of the cholesteatoma.



40 House-Dieter malleus nippers

**Amputating the head of the malleus**

The nippers are inserted on the neck of the malleus, just superior to the tensor tympani (or if no tendon, processus cochleariformis)



**41** Skin flaps overlying fascia graft. **42** Type III ossiculoplasty. **43** Extent of temporalis fascia graft.

**Finished modified radical mastoidectomy**

Consider ossiculoplasty type II using a patient's sculptured incus, factory made prosthesis or decide on type III ossiculoplasty where the tympanic membrane is laid against the head of the stapes. Line the cavity with a fascial graft and overlay with the canal skin flap.

The end