



# Treatment strategy in cholesteatoma

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# THE SURGEONS PRIMARY GOALS

1. Complete removal of all keratinizing squamous epithelium from the middle ear cleft and paratympanic cavities  
= NO RESIDUAL DISEASE.
2. Create protection against new retraction pockets/cholesteatoma  
= NO RECURRENT DISEASE
3. Preservation/restoration of function and creation of an unproblematic ear.



## IS RESTORATION OF NORMAL ANATOMY A GOAL FOR THE SURGEON?

**NO !**

**– because**

- normal anatomy + underpressure in the middle ear was probably responsible for the cholesteatoma; and**
- better stability and long-term function can often be obtained by a modified anatomy.**

# BASIC PRINCIPLES

- **INDIVIDUALIZED TREATMENT! SELECTION OF PATIENTS FOR MOST SUITED TECHNIQUE**
- **KNOWLEDGE OF ADVANTAGES AND DRAW-BACKS/RISKS OF THE SURGICAL TECHNIQUES APPLIED**
- **KNOWLEDGE OF ALL DETAILS IN THE CORRECT PROCEDURE OF THE TECHNIQUE APPLIED**
- **GOOD SURGICAL TRAINING AND SKILL**

# Prognosis parameters

- the patient's age
- extent of the disease
- the condition of the opposite ear
- first operation or revision

**Also include the possibility for follow-up when deciding which technique to use.**



# WHICH PROCEDURE?

1. MINOR CHOL. IN THE MIDDLE EAR

2. MINOR CHOL. IN THE ATTIC

3. LARGE CHOL., EXTENDING INTO  
THE ANTRUM AND MASTOID

# 1. Minor cholesteatoma, located in the middle ear

- Tympanoplasty, with or without measures to prevent new retractions, dependent on age of the patient, condition of the other ear, recurrent disease.

Measures: long-term ventilation tubes  
cartilage myringoplasty

Use wide access, retroauricular incision recommendable;  
remove tympanic membrane with squamous epithelium on  
the medial side.



## 2. Minor cholesteatoma in the attic

### OPTIONS AT ESTIMATED GOOD PROGNOSIS:

- Extended tympanoplasty with partial atticostomy
- Atticostomy with/without repair of the scutum or modified obliteration
- Canal wall up procedure

### AT ESTIMATED BAD PROGNOSIS

- Canal wall down procedure



# 3. Large Cholesteatoma

- Canal wall down procedure

is in most cases the recommendable method.

Large mastoids: + obliteration, except at very aggressive disease

Small mastoids: obliteration often not necessary

**CWD resultat after 3 years:  
unproblematic, dry ear**



# EARS WITH EXTENSIVE CHOLESTEATOMA: 10-YEAR RESULTS



## UNSTABLE EARS\*

<u>Age</u>	<u>&lt; 15 YEARS</u>	<u>&gt; 15 YEARS</u>
Canal wall up	92 %	53 %
Canal wall down	40 %	0

\*Operated for Recurrence or Cholesteatoma/deep retraction pockets.  
at follow-up

(Nyrop M, Bonding P. J Laryngol Otol 1997;111: 521-26)

# When is it bad to have a cavity?

- **When the cavity is bad.....**

**and that is often the case, if developed spontaneously after CWU-technique.**

**About 70 % of patients operated for cholestatoma by CWU technique end up with a cavity.**



# CWD: HOW TO AVOID OR MINIMIZE CAVITY PROBLEMS ?

- Be aware that you will first see the final result after about 3 years and that shrinking of obliteration material is a common phenomenon. So:
- Always try to obtain a nicely rounded cavity with a low facial ridge, and – very important – with good access through a wide EAM – even when you obliterate.
- In fact, it can be recommended to perform meatoplasty in most cholestatoma ears, in order to obtain a wide EAM, and thus creating optimum possibility for safe follow-up.