



SAQsTeam

# CASE 10

Case Scenario:

A three months infant was crying excessively (unusually), his mother noticed he was pulling his ear and brought him to the pediatrician and he found that there is an inflammation of the middle ear and the gram stain test identify:  
gram- positive cocci in short chains.

Regarding the case:

What is the most likely Diagnosis ?  
Otitis Media.

What is the causative organism in this case, and give three examples of the most common organisms causing Otitis Media?  
Streptococcus Pneumoniae.

1- group B strepto ,H.influenzae

2- : S.pyogenes ,Moraxella catarrhalis

3- Viral : the most common RSV (Respiratory Syncytial Virus )

Give three risk factors for OM

1-Anatomic abnormalities ( cleft palate )

2-Exposure to pathogens from day care.

3- Exposure to smoking.

Give three managements of OM

1- The antibiotic should be given to cover either **S.pneumonia** or **H.influenzae**.

2- Drainage of exudate may be required.

3- Chronic or serous OM need complex management, possibly surgical.

Give three complications of Otitis Media?

1- Hearing loss.

2- Meningitis.

3- Tympanic membrane perforation. (is a rupture or perforation of the eardrum).

Give three of diagnostic approaches

1- Clinical examination

2- Tympanometry ( detect the presence of fluid)

3- Gram stain and culture of aspirated fluid

### **General Questions (From theoretical lectures):**

Why do we use a tympanometry?

To detect presence of fluid.

What is tube who connects middle ear with nasopharynx?

Eustachian tube or Pharyngotympanic tube.

What is the function of the Eustachian tube ?

Protection, Ventilation and Clearance.

What are the drugs of choice in case of covering either S.pneumonia or H.influenzae?

Amoxicillin and Clavulanic Acid (Augmentin)

What is the most important complication of OM?

Meningitis.

Why OM is more common in children?

Because the Eustachian tube, a passage between the middle ear and the back of the throat, is smaller and horizontal in children.

Which form of OM causes promanent loss of hearing ?

The chronic form while the serous form causes only hearing deficit.

## Further important information:

### Summary

<b>Otitis media (infection of the middle ear)</b>			
	Acute OM	Chronic OM (Usually follows un treated acute OM)	Serous
Etiology	S.pneumoniae, group B Streptococcus (infants) & H.influenzae (normal flora in pharynx)	P.aeruginosa & H.influenzae Anaerobes	Collection of fluid within the middle ear as a result of negative pressure (NOT INFECTIOUS).
Clinical finding	Bulging & inflammation of Tympanic membrane	It may perforate (destruct) the tympanic membrane	
Risk factors	1) Infants due to horizontal eustachian tube. 2) Anomalies (cleft palate & adenoid) 3) URTI 4) Allergy		
Complications	MENINGITIS, hearing loss, mastoidosis		
Diagnosis	Done by Tympanometry or otoscopy		

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