

# Malignant External Otitis : Comparative Study

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## Introduction

- Malignant external otitis (MEO) or necrotizing external otitis is an aggressive and potentially fatal infection.
- It originates in the external ear canal, spreads progressively along the soft tissues and bone and may subsequently involve intracranial structures.
- Fungi are rarely isolated.
- We aim to investigate clinical characteristics and outcome in fungal MEO.

## Methods

- Retrospective study: n = 54 cases
- Department: Infectious Diseases
- Periode: between 1995 and 2013
- G1 with fungal MEO (18 cases; 33.3%) and G2 with non fungal MEO (36 cases; 66.7%)

## Results

- Mean age: 68.2 ± 10 in G1 and 58.7 ± 15 in G2 (p=0.02)
- Sex-ratio = 1
- Previous history of tuberculosis : 4 patients (7%)
- Diabetes and its degenerative complications: (figure1)

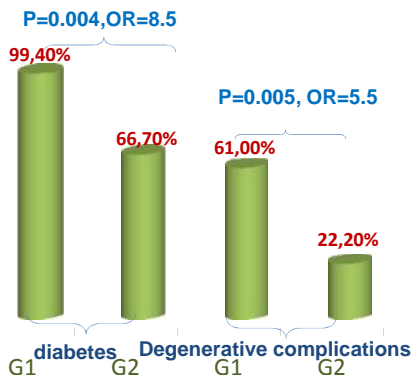


Figure1: Prevalence of diabetes and its degenerative complications in 2 groups

- Topical steroids: G1 = 50% ; G2 = 5.5%; p<0.0001 and OR=17
- Dizziness and tinnitus: revealed predominantly in G1 (33.3% vs. 11.1%; p=0.04, OR=4 and 50% vs. 19.4%; p=0.02, OR=4.1; respectively).
- Clinical symptoms: significantly more present in G1 than in G2.
- Bilateral disease: listed in 2 patients in each group (p=0.6).
- Mastoid pain: frequently described in G1 (88.9% vs. 38.9%; p=0.001 and OR=12.5).
- Temporomandibular joint: painful mostly in G1 (33.3% vs. 8.3%; p=0.04 and OR=5.5)
- Bone destruction : found in 72.2% of cases in G1 vs. 44.4% in G2; p=0.05. (table1)
- *Candida spp.* : the main germ (77.8%)
- *Aspergillus spp.* : isolated in 27.8%

Table1: Comparison of clinical signs between the 2 groups

Symptoms	Pourcentage		P	OR
	G1	G2		
Bilateral disease	11.1	5	0.6	-
Mastoid pain	88.9	38.9	<b>0.001</b>	12.5
Temporo-mandibular joint pain	33.3	8.3	<b>0.04</b>	5.5
Bone destruction	72.2	44.4	0.05	-

- Mean duration of treatment : longer in G1 (60.8±27days vs. 36.7±18 days; p=0.002)
- disease evolution: significantly more severe in G1 (table2)
- Poor outcome: more frequent in G1 (44.4% vs. 11.1%; p 0.012)
- Complications rate: 22.2% in G1 vs. 2.8% in G2; p=0.038 and OR= 10)
- Death: Two patients with fungal MEO

Table2: evolutionary modalities of the diseases in the 2 groups

Evolution modality	pourcentage		P
	G1	G2	
Poor outcome	44.1	11.1	<b>0.012</b>
Complications rate	22.1	2.8	<b>0.038</b>
death	11.1	0	0.5

## Discussion and Conclusion

- We concluded that fungal MEO are more likely to affect elderly and diabetic patients.
- This entity is known to be more invasive and may lead to severe clinical and radiological complications.
- Suitable treatment should be quickly started and maintained longtime to improve its prognosis.