

# Analysis of TMM Examination Results in 185 Patients with Otitis Media

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**Objective:** To detect the ETS of 185 patients with otitis media by TMM and analyze the role of TMM in the diagnosis and treatment of otitis media.

**Methods:** the ET function of 185 patients with different types of otitis media was examined by TMM, including 80 cases of chronic suppurative otitis media (116 sides) in group A, 78 cases of secretory otitis media (128 sides) in group B, 13 cases of middle ear cholesteatoma (16 sides) in group C, and 14 cases of pure tympanic membrane perforation in (15 sides) group D. Use the rank sum test to compare ETS for all affected ears and all normal ears in each group.

**Results :**Group A:the ETS of affected ear was  $4.69\pm 1.33$  while that of normal ear was  $4.84\pm 1.20$ ,The difference between the two is not statistically significant (  $P_A=0.507$  ) ; Group B:the ETS of affected ear was  $3.64\pm 1.89$  while that of normal ear was  $4.61\pm 1.50$  , The difference between the two is statistically significant (  $*P_B=0.013$  ) ; Group C:the ETS of affected ear was  $3.56\pm 1.97$  while that of normal ear was  $5.30\pm 0.95$  , The difference between the two is statistically significant (  $*P_C=0.022$  ) ; Group D:the ETS of affected ear was  $4.53\pm 1.19$  while that of normal ear was  $4.85\pm 1.14$ ,The difference between the two is not statistically significant (  $P_D=0.489$  ) .In all patients, ETS of the normal ear was higher than that of affected ear.

**Conclusions:** ETD is often associated with secretory otitis media and middle ear cholesteatoma. ETD is closely related to the occurrence, development and prognosis of secretory otitis media and middle ear cholesteatoma.However, for ETD, chronic suppurative otitis media and simple ear drum perforation, due to the limitations of the sample quantity included, the statistical results obtained are not clear about the relationship between ETD and chronic suppurative otitis media and simple ear drum perforation.The application of TMM to evaluate the ET function of otitis media patients is a simple, economical, rapid and non-invasive method, which is easy for the subjects to cooperate and relatively accurate.

table analysis of ETS in patients with various types otitis media

groups	Normal ears		affected ears		P value
	No.	ETS	No.	ETS	
A.suppurative otitis media	44	$4.84\pm 1.20$	116	$4.69\pm 1.33$	$P_A=0.507$
B.secretory otitis media	28	$4.61\pm 1.50$	128	$3.64\pm 1.89$	$*P_B=0.013$
C.middle ear cholesteatoma	10	$5.30\pm 0.95$	16	$3.56\pm 1.97$	$*P_C=0.022$
D.simple ear drum perforation	13	$4.85\pm 1.14$	15	$4.53\pm 1.19$	$P_D=0.489$