

Ukuran Tuba Eustachius Berdasar HRCT Mastoid Pada Gangguan Fungsi Tuba Eustachius Pasien Otitis Media Supuratif Kronik Tipe Aman = Eustachian Tube Size Based on Mastoid HRCT in Impaired Eustachian Tube Function in Benign Type Chronic Suppurative Otitis Media Patients

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Abstrak

Latar Belakang: Faktor predisposisi utama pada otitis media supuratif kronik (OMSK) adalah gangguan fungsi tuba eustachius (TE). Adanya gangguan fungsi TE memungkinkan terjadinya OMSK berulang walaupun telah diterapi. Variasi anatomi dari telinga berupa ukuran TE berkaitan dengan perbedaan fungsi fisiologis TE.

Tujuan: Membantu memperkirakan status gangguan fungsi TE berdasarkan pemeriksaan HRCT mastoid.

Metode: Data sekunder status fungsi TE berdasarkan pemeriksaan timpanometri automatic Toynbee Eustachian Tube Function Test 2 (ETF2) terdiri dari tanpa gangguan fungsi TE dan dengan gangguan fungsi TE, kemudian dilakukan pengukuran panjang TE, diameter TE pre-timpani, dan regio isthmus pada pemeriksaan High Resolution Computed Tomography (HRCT) mastoid tebal irisan 1 mm potongan sagital oblik dan aksial berdasarkan bidang Ku-Copson dari sistem Picture Archiving and Communication System (PACS). Pasien dengan kolesteatoma dieksklusi. Rerata panjang TE, diameter TE pre-timpani, dan regio isthmus dengan gangguan fungsi TE dibandingkan tanpa gangguan fungsi TE dianalisis menggunakan uji-T tidak berpasangan.

Hasil: Didapatkan perbedaan signifikan rerata panjang TE, diameter TE pre-timpani, dan regio isthmus pada gangguan fungsi TE dibandingkan tanpa gangguan fungsi TE ($p < 0,001$), dimana nilai rerata panjang TE dengan gangguan fungsi TE lebih pendek ($35,2 \pm 1,5$ mm) dibandingkan tanpa gangguan fungsi TE ($37,4 \pm 1,7$ mm) dan diameter pre-timpani serta diameter isthmus TE lebih kecil pada pasien dengan gangguan fungsi TE (diameter pretimpani: $3,5 \pm 0,1$ mm; diameter isthmus: $0,89 \pm 0,09$ mm) dibandingkan tanpa gangguan fungsi TE (diameter pretimpani: $3,9 \pm 0,1$ mm; diameter isthmus: $1,08 \pm 0,07$ mm).

Simpulan: Ukuran TE dengan gangguan fungsi TE lebih kecil dibandingkan tanpa gangguan fungsi TE pada pasien OMSK tipe aman.

.....**Background:** The main predisposing factor in chronic suppurative otitis media (CSOM) is dysfunction of the eustachian tube (ET). The presence of ET function disorders allows CSOM to recur even though it has been treated. Anatomical variations of the ear in the form of ET size are related to differences in ET physiological function.

Objectives: To estimate the status of impaired ET function based on mastoid HRCT examination.

Methods: Secondary data on ET function status based on the Toynbee ETF2 automatic tympanometry examination consisted of without ET function disorder and with ET function disorder, then ET length, pre-tympanic ET diameter, and isthmus region were measured on HRCT mastoid examination with 1 mm thick slice of the mastoid oblique sagittal section and axial based on the Ku-Copson plane of the Picture Archiving and Communication System (PACS). Patients with cholesteatoma were excluded. The mean ET length, pre-tympanic ET diameter, and isthmus region with impaired ET function compared to those without

impaired ET function were analysis using an unpaired T-test.

Results: There were significant differences in the mean ET length, ET diameter in the pre-tympani region, and isthmus region in ET function disorders compared to those without ET function disorders ($p < 0.001$), where the mean ET length with ET function disorders was shorter (35.2 ± 1.5 mm) compared to those without ET function disorder (37.4 ± 1.7 mm) and the pre-tympani diameter and ET isthmus diameter were smaller in patients with ET function disorder (pre-tympanic diameter: 3.5 ± 0.1 mm; isthmus diameter : 0.89 ± 0.09 mm) compared to no ET function disorder (pre-tympanic diameter: 3.9 ± 0.1 mm; isthmus diameter: 1.08 ± 0.07 mm).

Conclusion: ET size with impaired ET function is smaller than without impaired ET function in CSOM patients with benign type.