

# Aktivitas Otot Mastikasi Pada Penderita Gangguan Sendi Temporomandibula Dengan Tipe Wajah Dolichofacial (Studi Elektromiografi Kasus Maloklusi) = Masticatory Muscle Activity in Dolichofacial Patients with Temporomandibular Joint Disorders: An Electromyographic Study

Antolis, Maureen, author

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## Abstrak

Tujuan: Menganalisis pengaruh gangguan sendi temporomandibula terhadap aktivitas otot mastikasi. Metode penelitian: Subjek merupakan pasien dengan tipe wajah dolichofacial berusia 15 - 35 tahun yang belum melakukan perawatan ortodonti, yaitu 11 dengan gangguan sendi temporomandibula dan 11 tanpa gangguan sendi temporomandibula sebagai kontrol. Pemeriksaan elektromiografi pada otot masseter dan temporalis anterior dilakukan dengan menginstruksikan pasien menggigit cotton rolls selama 5 detik. Perhitungan Root Mean Square dari pemeriksaan EMG masing-masing otot dibandingkan dengan uji T tidak berpasangan dan uji korelasi Spearman. Hasil: Terdapat perbedaan yang signifikan antara aktivitas otot kanan masseter, kiri masseter, dan kanan temporalis anterior pada pasien maloklusi dengan dan tanpa gangguan sendi temporomandibula yang memiliki tipe wajah dolichofacial. Terdapat korelasi negatif antara otot mastikasi tersebut dengan gangguan sendi temporomandibula. Kesimpulan: Pasien dolichofacial dengan gangguan sendi temporomandibula memiliki aktivitas otot masseter dan otot temporalis anterior yang lebih lemah jika dibandingkan dengan pasien tanpa gangguan sendi temporomandibula

.....Objectives: This study aimed to analyze the influence of temporomandibular joint disorder (TMD) on surface electromyography activity in the masticatory muscles.

Methods: Dolichofacial patients (n = 22) aged 15 to 35 years were examined: 11 with TMD and 11 control subjects without TMD. A standardized surface electromyography recording was performed on the masticatory muscle during 5 s of maximum voluntary clenching on cotton rolls. The root mean square value of each muscle was calculated and analyzed for differences using an unpaired Student's t-test. Spearman's correlation coefficients (r) were calculated for the determination of correlations between TMD and root mean square values. Results: Surface electromyography revealed significant differences in the right temporal, right and left masseter during maximum voluntary clenching. Both sides of the masseter and right temporal also showed a negative correlation with TMD. During maximum voluntary clenching, TMD patients had relatively lower elevator muscle activity. Conclusions: Electromyographic activities in the masseter muscles were lower in dolichofacial patients with TMD than non-TMD controls. Surface electromyography of masticatory muscles may assist the clinical assessment of TMD patients.