

The correlation between joint sound against temporomandibular opening index on maxillary and mandibular teeth loss

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Introduction & Objective: Temporomandibular Disorder (TMD) is a condition that affects adjacent masticatory or Temporomandibular Joints (TMJ), including the entire tissue. A person suffering from TMD may feel pain in the temporomandibular joint or in the face area. Evaluation for TMD is lateral jaw movement, protrusion and maximum mouth opening. Disharmony in one or more of these evaluations can be a TMD indicator. The objective of this study is to understand the correlation between joint sound against Temporomandibular Opening Index (TOI) on cases of maxillary and mandibular teeth loss.

Method: Subjects were taken from Yogyakarta province. There were 40 subjects: 10 lost two quadrants of posterior teeth for 18 months; 10 lost one quadrant of posterior teeth for 18 months; 10 lost two quadrants of posterior teeth for 12 months; and 10 lost one quadrant of posterior teeth for 12 months. Mouth opening were measured by active and passive means, and then inserted into a formula to acquire TOI. After that, temporomandibular joint sound was taken using special prototype of electrosonography and processed using MATLAB software to acquire the data. The joint sound was taken on both sides. The data were tested using regression test to obtain the correlation between TOI and joint sound, $\alpha=5\%$.

Result: Means of TOI on all groups showed significant differences ($p<0.05$) of positive correlation between frequency and amplitude of joint sound.

Conclusion: There is positive correlation between joint sound and TOI in cases of maxillary and mandibular tooth loss. This study uses the temporomandibular openings index, which when the research and refinement continues, it could be accurate predictor of cases of temporomandibular disorders.

Biography

Haryo Mustiko Dipoyono has completed his DDS degree and started his career as a Lecturer at Gadjah Mada University, Indonesia. He completed his MSc and PhD Degree from Airlangga University Indonesia. His is currently working as a Professor in Prosthodontic Sciences in Gadjah Mada University, Indonesia.

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