INTISARI

Kehilangan gigi, terutama gigi posterior yang menerima beban pengunyahan besar, bila dibiarkan akan menyebabkan gigi di sampingnya dan yang seharusnya berkontak mengalami migrasi patologis. Migrasi ini akan mengakibatkan ketidakseimbangan fungsi oklusal sehingga memicu terjadinya gangguan sendi temporomandibula dengan gejala yang sering dijumpai yaitu bunyi sendi. Untuk mencegah migrasi gigi tersebut, maka dipergunakan gigi tiruan. Penelitian ini bertujuan untuk mengetahui pengaruh lama pemakaian gigi tiruan sebagian sebagian lepasan posterior terhadap perubahan bunyi sendi temporomandibula.

Penelitian ini merupakan penelitian kuasi eksperimental dengan jumlah subjek sebanyak 10 orang. Pemeriksaan dan perekaman bunyi sendi dilakukan menggunakan prototipe elektrosonografi pada saat sebelum, sesaat setelah, dan seminggu setelah pemakaian gigi tiruan. Data perekaman dianalisis menggunakan Matlab dan Geopsy sehingga didapat hasil frekuensi dan amplitudo. Data tersebut kemudian dianalisis dengan uji *Repeated Measure One-way Anova* dan uji *post hoc* LSD.

Hasil penelitian menunjukkan bahwa terdapat perbedaan amplitudo dan frekuensi yang signifikan (p<0,05). Hasil uji *post hoc* menunjukkan penurunan amplitudo setelah pemakaian gigi tiruan, sedangkan pada frekuensi hanya sebelum pemakaian dan sesaat setelah pemakaian gigi tiruan yang tidak menunjukkan perbedaan signifikan (p>0,05). Kesimpulan penelitian ini adalah lama pemakaian gigi tiruan berpengaruh terhadap perubahan amplitudo dan frekuensi bunyi sendi.

Kata kunci : gigi tiruan sebagian lepasan posterior rahang bawah, bunyi sendi, frekuensi, amplitudo, prototipe elektrosonografi

ABSTRACT

Tooth loss, especially posterior region which endure the masticatory force, if being untreated it will lead to pathological migration of the adjacent teeth and opposing teeth. This migration will affect occlusal stability that trigger temporomandibular disorder with the most common symptom is joint sound. Partial denture is used to prevent this tooth migration. The aims of this research is to determine potential changes of joint sound related to insertion of mandible posterior removable partial denture.

The type of this research was a quasi-experimental with ten subjects. Joint sound measurement and recording had been done using electrosonography prototype. The measurement and recording were held before, shortly after, and one week after insertion of partial denture. The recording were analyzed by Matlab and Geopsy, and the results were presented in frequency and amplitude. Obtained and measured data were analyzed by Repeated Measures One-way Anova and Post hoc LSD test.

The results showed that there were significant differences in amplitude and frequency ($p < 0.05$) among before, shortly after, and one week after insertion of partial denture. Post hoc test showed that there was significant decrease in amplitude after insertion of partial denture, but in frequency, there was only no significant differences in before and shortly after insertion of partial denture ($p > 0.05$). The conclusion of this study is the insertion of removable partial denture did affected the amplitude and the frequency of joint sound.

Keywords : mandible posterior removable partial denture, joint sound, frequency, amplitude, electrosonography prototype