

INTISARI

Hemimandibulektomi menyebabkan ketidakseimbangan sistem biomekanik akibat hilangnya sebagian mandibula, berubahnya hubungan maksilomandibula, berkurangnya kontak gigi, dan terbentuknya *scar*. Tujuan penelitian untuk mengetahui nilai kekuatan gigit pasien pascahemimandibulektomi dan membandingkan dengan normal, membandingkan kekuatan gigit pasien pascahemimandibulektomi berdasarkan rekonstruksi, jumlah kontak gigi molar dan klasifikasi hemimandibulektomi di Poli Bedah Mulut RSUP Sardjito.

Metode penelitian. Jenis penelitian *cross-sectional*, dengan memanggil pasien pascahemimandibulektomi tahun 2011-2017 di poli Bedah Mulut RSUP Dr. Sardjito sebagai kelompok kasus, untuk kelompok kontrol adalah subyek normal dengan usia dan jenis kelamin sebanding. Kedua kelompok dilakukan pemeriksaan ekstra dan intra oral untuk menilai status dental yang memenuhi kriteria inklusi, kemudian diukur kekuatan gigit molar sisi nonreseksi untuk kelompok kasus, dan kelompok kontrol pada sisi yang sering digunakan, menggunakan *bite-force meter*.

Hasil penelitian. Dua puluh dua pasien pascahemimandibulektomi dan 21 pasien normal terlibat dalam penelitian. Pasien pascahemimandibulektomi terdiri dari 16 pasien dengan rekonstruksi (tanpa *replacement* TMJ) dan 6 pasien tanpa rekonstruksi. Uji statistik *independent t-test* menunjukkan kekuatan gigit kelompok kasus secara signifikan lebih rendah daripada kontrol ($p=0,000$). Kekuatan gigit pasien pascahemimandibulektomi, dengan jumlah kontak gigi molar >1 pasang lebih besar daripada 1 pasang ($p=0,004$), berkorelasi positif ($p=0,002$; $r=0,612$). Kekuatan gigit berdasarkan rekonstruksi tidak ada perbedaan signifikan ($p>0,05$), demikian juga berdasarkan luas jaringan yang hilang ($p>0,05$). Kesimpulan. Kekuatan gigit gigi molar kelompok pascahemimandibulektomi (164,6 N) lebih rendah dibandingkan kelompok kontrol (674,4 N). Pada pasien pascahemimandibulektomi, banyaknya kontak gigi molar mempengaruhi kekuatan gigit, namun tidak dipengaruhi ada tidaknya rekonstruksi (tanpa *replacement* TMJ), luas jaringan yang hilang dan *follow up interval after surgery*.

Kata kunci : hemimandibulektomi, kekuatan gigit, rekonstruksi, tanpa rekonstruksi

ABSTRACT

Hemimandibulectomy causes impaired system of biomechanics due to partial loss of mandibular bones, changes in maxillomandibular relations, reduced tooth contact, and scar formation. This study was aimed at finding out the patient's bite force after hemimandibulectomy and comparing it with the normal one, comparing the patient's bite force after hemimandibulectomy on the basis of reconstruction, number of molar tooth contacts and classification of hemimandibulectomy at the Oral Surgery Polyclinic of Dr. Sardjito Hospital, Yogyakarta, Indonesia.

Method. *Categorized into a case study-control research, this study involved hemimandibulectomy-post patients between year 2011 and 2017 in the Oral Surgery Polyclinic of Dr. Sardjito Hospital as the case group whereas the control group comprised normal subjects with similar age and gender. Both groups underwent extra and intra oral examination to assess dental status that met the inclusion criteria, in which the bite force of the posterior non-resection side was measured, while for the control group, it was done to the most-frequently used side, using bite force meter.*

Results. *Twenty-two hemimandibulectomy-post patients and 21 normal patients were engaged in this study. The first group consisted of 16 hemimandibulectomy with reconstruction patients and the rest 6 patients belonged to the one without reconstruction. Independent t-test indicated that the bite force of the case group was significantly lower than the control group ($p = 0.000$). The bite force of the hemimandibulectomy-post patients, with the number of posterior tooth contact > 1 pair was found stronger than 1 pair ($p = 0.004$), suggesting a positive correlation ($p = 0.002$; $r = 0.612$). Meanwhile, no significant differences ($p > 0.05$) were found in the bite force of the reconstruction hemimandibulectomy-post patients and the one without reconstruction. The similar fact was also found when comparing the width of the missing tissues ($p > 0.05$).*

Conclusion. *The bite force of posterior teeth among the hemimandibulectomy-post patients (164.6 N) was lower than that of control group (674.4 N). In the hemimandibulectomy-post patients, the number of posterior tooth contacts affected the posterior bite force, yet it was unaffected by reconstruction, width of lost tissues and follow up interval after surgery.*

Keyword: *bite force, hemimandibulectomy, reconstruction, without reconstruction*