

## INTISARI

Rekonstruksi hemimandibulektomi diperlukan untuk mengembalikan perubahan yang terjadi pasca reseksi. Keberhasilan rekonstruksi membutuhkan bentuk lengkung, desain, dan penempatan pelat yang tepat. Pengembangan metode *prebending* dan transfer pelat rekonstruksi berupa *plate positioning guide* (PPG) akan menghasilkan bentuk dan akurasi penempatan pelat rekonstruksi waktu operasi. Tujuan penelitian ini adalah mengevaluasi penggunaan PPG terhadap akurasi penempatan pelat rekonstruksi pasca hemimandibulektomi.

Dua belas subjek pasca hemimandibulektomi tahun 2014-2019 sesuai kriteria inklusi dipanggil ulang, subjek terdiri dari kelompok PPG (n=6) dan Non-PPG (n=6). Akurasi diukur berdasarkan kesimetrisan lebar lengkung mandibula dan kesamaan ketinggian penempatan pelat rekonstruksi. *Software* RadiAnt DICOM Viewer digunakan untuk pengukuran kesimetrisan lebar lengkung mandibula pada foto rontgen submentoverteks dan kesamaan ketinggian penempatan pelat rekonstruksi pada foto *orthopantomogram* (OPG). Analisis kesimetrisan menggunakan *one-sample test* dengan *test value* 0,1 cm.

Kesimetrisan lebar lengkung mandibula antara sisi yang direkonstruksi dengan yang tidak direseksi pada kelompok PPG didapatkan 83,3% subjek simetris, Non-PPG 50% subjek. Kesamaan ketinggian penempatan pelat rekonstruksi pada kelompok PPG didapatkan 100% subjek sama tinggi, Non-PPG 83,3% subjek. Hasil akurasi penempatan pelat rekonstruksi didapatkan pada seluruh kelompok PPG (100%) sedangkan kelompok Non-PPG hanya 66,7% subjek. Uji *independent sample test* menunjukkan perbedaan signifikan antara kedua kelompok ( $p=0,001$ ). Kesimpulan: Penggunaan PPG sebagai alat transfer pelat rekonstruksi memberikan akurasi yang lebih baik pada penempatan pelat rekonstruksi hemimandibulektomi dibandingkan tanpa penggunaan PPG.

Kata kunci: hemimandibulektomi, *plate positioning guide* (PPG), akurasi penempatan pelat rekonstruksi.

## ABSTRACT

*Hemimandibulectomy reconstruction is needed to reverse the changes that occurred after resection. Successful reconstruction requires the correct curved shape, design, and placement of plates. The development of the prebending method and the transfer of the reconstruction plate in the form of a plate positioning guide (PPG) will result in the shape and accuracy of the placement of the reconstruction plate in operation time. The purpose of this study was to evaluate the use of PPG on the accuracy of post hemimandibulectomy reconstruction plate placement.*

*Twelve post hemimandibulectomy subjects in 2014-2019 according to the inclusion criteria were recalled, the subjects consisted of the PPG ( $n = 6$ ) and Non-PPG ( $n = 6$ ) groups. Accuracy was measured based on the symmetrical width of the mandibular arch and the similarity in the placement of the reconstructive plates. The RadiAnt DICOM Viewer software is used to measure the symmetrical width of the mandibular arch on submentovertex X-rays and the similarity in the height of the reconstruction plate placement on the orthopantomogram (OPG) photo. Symmetry analysis used a one-sample test with a test value of 0.1 cm.*

*The symmetry of the mandibular arch width between the reconstructed and non-resected sides in the PPG group was found to be 83.3% symmetrical subjects, 50% Non-PPG subjects. The similarity in the height of the reconstruction plate placement in the PPG group was found to be 100% of the subjects were the same height, Non-PPG was 83.3% of the subjects. The results of the reconstruction plate placement accuracy were obtained in all PPG groups (100%) while the Non-PPG group was only 66.7% subjects. The independent sample test showed a significant difference between the two groups ( $p = 0.001$ ). Conclusion: The use of PPG as a reconstruction plate transfer tool provides better accuracy on the placement of a hemimandibulectomy reconstruction plate than without the use of PPG.*

*Keywords: hemimandibulectomy, plate positioning guide (PPG), accuracy of reconstruction plate placement.*