Comparative Study of Robotic and Endoscopic Submandibular Gland Resection

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Abstract

The aim of this study is to compare the short-term clinicopathologic and outcome results of robotic assisted submandibular gland (SMG) resection and endoscopic SMG resection via retroauricular approach.

Methods

34 patients underwent endoscopic resection [(EAR, n=12) vs robotic assisted resection (RAR, n=22)] via SMG via the retroauricular approach. Prospective analysis of the short-term clinical outcomes were compared between the two groups with the following factors: length of incision, size of the tumor and SMG, amount of intraoperative bleeding, operation time, amount and duration of hospital stay, cosmetic satisfaction and complications.

Results

Operative time was reported in all patients without any significant intraoperative complications or conversion to open surgery. The operation time in the RAR group was comparable to the EAR group (p = .320). The length of incision (p = 1.000), size of the tumor (p = 0.812) and SMG (p = 1.000), amount of intraoperative bleeding (p = 0.701), total amount (p = 0.000) of blood lost during surgery showed significant less bleeding in the RAR group.

The mean duration of hospital stay was comparable (p = 1.000). No significant difference was seen between the overall postoperative complications between the two groups. Patients of both groups showed excellent cosmetic outcomes with great satisfaction and no significant difference between the groups (p = .861).

Conclusion

The early surgical outcomes of RAR group of the SMG were comparable with those of the EAR group. The robotic-assisted procedure provided technical conscience to the surgeon, but showed no significant benefit regarding the outcomes up to date. We expect that accumulation of experiences in RAR and development of robotic technique and instruments may lead to better outcomes in the future.

References