**ABSTRACT**

**INTRODUCTION:** Compliance with postoperative care in the maxillofacial trauma population is uniformly considered to be poor. The axiom of "treat and street" is not a function of lack of access to postoperative care but rather its anticipated lack of utilization. The goal of this study is to identify factors associated with increased compliance with postoperative management of mandible fractures.

**METHODS AND MATERIALS:** Using Current Procedural Terminology (CPT) codes to identify maxillofacial injuries requiring operative repair, a subset of isolated mandible fractures was identified. Age, gender, race, insurance type, travel distance to our site of care, type of fracture, surgical approach, and complications were used as variables in univariate regression modeling to examine factors associated with compliance to postoperative care.

**RESULTS:** Between 2010 and 2013, 344 isolated mandible fractures were identified. Mean age was 34.6, and 82.6% were male. 83.1% of patients made their first post-operative follow up visit. Demographic data, fracture location, distance to medical center (p=0.75), type of repair, use of maxillomandibular fixation following the procedure, use of drains (p=0.61), or non-absorbable suture (p=0.32) did not appear post operative compliance is dependent on variables related to making first postoperative follow up. Thus, no alteration of practice or improvement of care in the maxillofacial trauma population is required.

**CONCLUSIONS:** Postoperative compliance after surgical repair is much better than what is currently represented in the literature. It would appear postoperative compliance is dependent on patient related factors more so than what can be modified by the surgeon.

**REFERENCES**

1. Patients undergoing operative repair of isolated mandibular injuries have a much higher compliance to follow up than has been previously discussed in the literature.
2. While the use of maxillomandibular fixation does seem to trend toward improvement in post-operative follow-up, no form of surgical technique nor appliance used was found to significantly improve the likelihood of patient follow up. Thus, no alteration of practice or operative technique should be made in an attempt to improve compliance.
3. The use of tobacco prior to operative repair was the only variable found to be statistically significant in this analysis. This finding is more worrisome for this patient cohort as smoking history is a well known contributor to increased postoperative complications.
4. Patients with private insurance and Medicare were more likely to present for follow-up than those without insurance however this failed to reach statistical significance.
5. Patient compliance to post-operative follow up appears to be more dependent on patient related factors rather than what can be modified by the surgeon. This study does help identify certain demographic information that may help surgeons recognize patients that may be at higher risk for failed post-operative follow up.

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**RESULTS**

344 patients were found to meet inclusion criteria for this study. Of the isolated mandible fractures identified, 202 (58.7%) were found to encompass 2 or more fracture sites (Figure 1). Patient demographic information can be found in Table 1.

Overall, 83.1% (N=286) of patients made their first scheduled follow up. Patients had a median time to follow up of 8 days and were followed for an average of 16 weeks following operative intervention. Of the 17% who failed to make their first scheduled follow up visit, 63.7% (N=37) of these patients did not follow up at all during the time frame of this retrospective analysis.

Univariate regression analysis seen in Table 3 shows that surgical approach, use of drains (p=0.61) or non-absorbable suture (p=0.32), and distance of the medical center from the patient’s home address (p=0.75) did not affect presentation to first post-operative visit.

Complications following mandibular repair occurred in 12.5% (N=43) of patients, largely contributed to post-operative infection (N=32). This was found not to be affected by the type of surgical approach (transcervical (TC) p=0.62, transoral (TO) p=0.62, maxillomandibular fixation (MMF) p=0.58).

Patients who failed to make their first scheduled follow up were not found to have an increased likelihood of postoperative complications (p=0.17).

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