

BACKGROUND

- Facial feminization surgery (FFS) encompasses a broad range of procedures designed to modify facial features to align with a patient's gender identity
- Genioplasty and chondrolaryngoplasty are frequently performed to refine the lower face and neck contour, thereby reducing features often perceived as masculine
- These procedures have historically required separate incisions, introducing the potential for multiple scars, longer operative times, and increased morbidity
- A novel surgical approach using a single submental incision was developed by the senior author
- **Study Aim:** To describe this surgical technique and evaluate clinical outcomes using a single- versus dual-incision approach

METHODS

- Design: Retrospective observational cohort study 2017-2024
- Patients who underwent FFS with concurrent chondrolaryngoplasty and genioplasty
- Collected outcomes:
 - Complications
 - Operative time
 - Estimate blood loss
 - Length of stay
 - Patient reported satisfaction
- Variables in each group were compared via chi-squared or Mann-Whitney U

METHODS

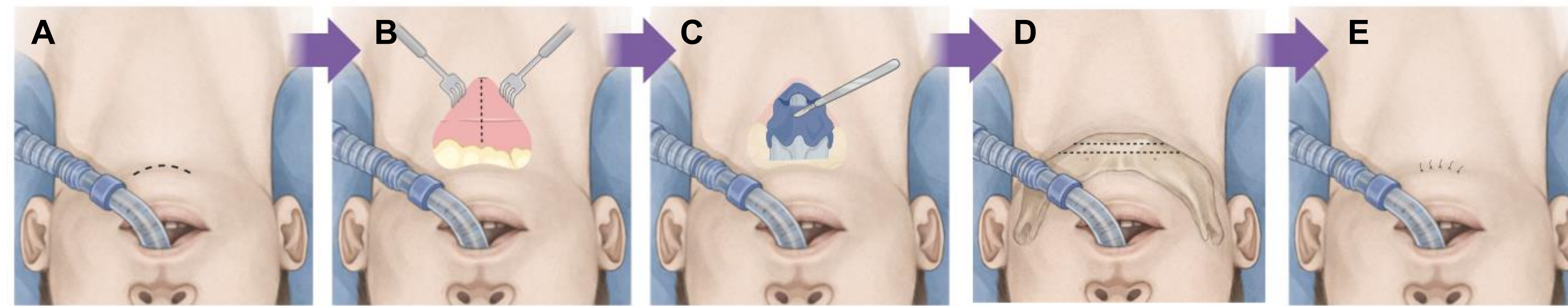


Figure 1: The surgical technique begins with a submental incision placed in a natural skin crease (A), subcutaneous dissection is carried inferiorly to expose the strap muscles, which are divided at the midline to access the laryngeal framework (B). Following identification of the cricoid cartilage, the tracheal prominence is grasped, resected, and contoured (C). Through the same incision, subperiosteal dissection extends to the mandibular body and angles, facilitating both osteotomy and bony contouring of the chin and lower mandible (D). Finally, finishing with closure of the incision (E).

RESULTS

- 106 patients met inclusion criteria
 - Single-incision: 69 patients (65.1%)
 - Dual-incision: 37 patients (34.9%)
- Complication rates were low and comparable between groups:
 - Hematoma: 2.7% vs 6.6% ($p = 0.41$)
 - Superficial surgical site infection: 5.8% vs 2.7% ($p = 0.66$)
 - Wound dehiscence: 1.4% vs 0% ($p = 1.00$)
- No cases of permanent nerve injury, airway compromise, or reoperation were recorded
- Median operative time was significantly shorter with single-incision technique: 243 vs 269 minutes ($p = 0.003$)
- Estimated blood loss and length of stay were similar between groups
- Patient satisfaction trended higher in the single-incision group: 82.6% vs 75.7% ($p = 0.07$)

RESULTS

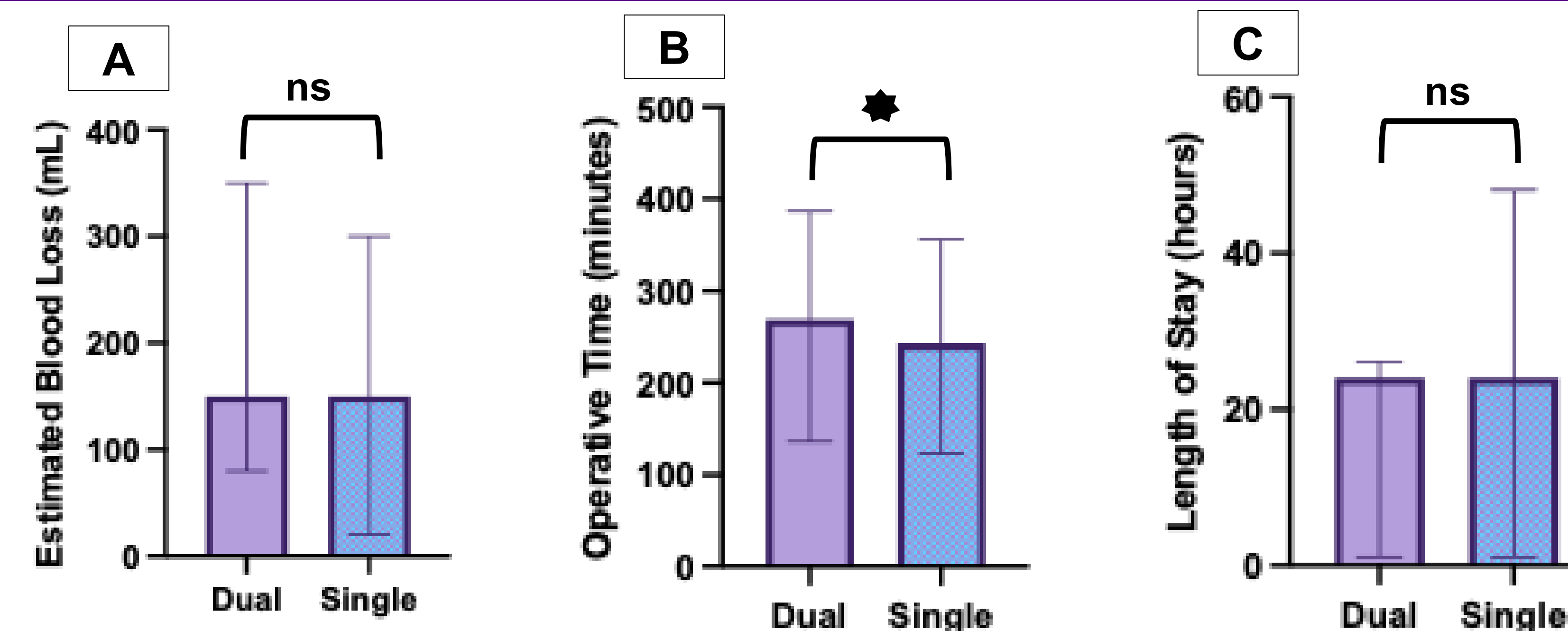


Figure 2: Estimated blood loss (A), operative time (B) and length of hospital stay (C) between dual versus single incision approaches. * = significant difference.

CONCLUSION

- The single-incision approach to genioplasty and chondrolaryngoplasty is a safe, effective, and efficient alternative to the dual-incision approach
- Single-incision was associated with reduced operative time without increased complications
- This technique provides aesthetic benefit of a single, well-concealed submental scar
- Has the potential to improve patient satisfaction and streamline FFS operative workflows
- Future directions: prospective studies and long-term outcomes