ankylosis patients presenting in combination with mandibular dysplasia, whether to perform IPA or distraction osteogenesis (DO) first has long been a controversial issue. This study aims to provide IPA with a new graft material sufficient to prevent recurrence, to modify the protocol of performing DO 6 months after IPA, and to evaluate its efficacy in treating TMJ ankylosis patients with mandibular dysplasia.

**METHODS:** 6 patients with unilateral TMJ ankylosis and mandibular dysplasia were treated in our study. We applied the temporalis fascia flap and part of adjacent galea aponeurotica to fill the space after surgical release. Mouth-opening exercises were started immediately post-operation and lasted 3 months. DO was performed 6 months following IPA later and had 4 months’ consolidation after completion of distraction. Orthodontic therapy was done when necessary. Preoperative, immediately post-first-operative and the latest follow-up maximum inte-incisal distance (MIO) were recorded, as was the distraction length. The body mass index (BMI) was measured at each patient’s post-operative visit. The follow-up period was 3–4 years.

**RESULTS:** All patients had ideal outcomes with significant improvement in facial aesthetic, mouth-opening and occlusion. No major complication or recurrence was observed at follow-up. The mean MIO was 4.83 ± 2.79mm preoperative, 28.17 ± 4.92mm immediately post-first-operative, and 35.67 ± 3.39mm at the latest follow-up. The distraction distance mean value was 16.17 ± 5.98mm, ranged from 10 to 27mm. The BMI improved from 17.33 ± 0.64 kg/m² preoperative to 18.75 ± 0.60 kg/m² before DO.

**CONCLUSION:** In this article, a staged treatment protocol, recommendations for temporalis fascia flap and adjacent galea aponeurotica as graft material of IPA are discussed in treating patients with TMJ ankylosis with mandibular dysplasia. All patients achieved mouth opening after IPA, which contributes to not only improving nutrition, but also peri-operative airway management, better preparing the patient for DO. This modified method proved to be easy and effective to prevent recurrence, improve mandibular length and improve final dental occlusion.

**Reference Citations:**
1. Erol B, Tanrikulu R, Gorgun B. A clinical study on ankylosis of the temporomandibular joint. J Craniomaxillofac Surg 2006; 34:100–6.
2. Loveless TP, Bjornland T, Dodson TB, Keith DA. Efficacy of temporomandibular joint ankylosis surgical treatment. J Oral Maxillofac Surg 2010; 68:1276–82.
3. Sawhney CP. Bony ankylosis of the temporomandibular joint: follow up of 70 patients treated with arthroplasty and acrylic spacer interposition. Plast Reconstr Surg 1986; 77(1): 29–40.
4. Yoon HJ, Kim HG. Intraoral mandibular distraction osteogenesis in facial asymmetry patients with unilateral temporomandibular joint bony ankylosis. Int J Oral Maxillofac Surg 2002; 31:544–8.
levels. 30.6% of patients had high aFXa levels, including 12.2% of the population who were therapeutically anti-coagulated. Patient weight predicted enoxaparin metabolism (r² value of 0.45). When compared to patients given enoxaparin 40mg once daily, patients given enoxaparin 40mg twice daily 1) were significantly less likely to have low aFXa (9.2% vs. 44.1%, p<0.001), 2) had non-significant increase in clinically relevant bleeding (6.1% vs. 3.2%, p=0.34), and 3) had significantly fewer post-operative VTE (0% vs. 5.3% p=0.021).

CONCLUSION: With enoxaparin 40mg twice daily, only 9.2% of patients receive inadequate prophylaxis based on aFXa level. This is relevant because prior work has correlated inadequate prophylaxis with symptomatic VTE after plastic surgery procedures. When compared to patients who receive enoxaparin 40mg per day, patients who receive enoxaparin 40mg twice daily had significantly fewer VTE and had non-significant increase in clinically relevant bleeding. Ongoing patient recruitment will further define the effectiveness and safety profile of this intervention.

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Esophageal Reconstruction with Supercharged Jejunal Interposition: A Reliable Intervention for Establishing Esophageal Continuity in a Pediatric Population

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INTRODUCTION: In children, esophageal defects cause significant morbidity. The Foker procedure, gastric pull-up, and colonic interposition have demonstrated success in establishing esophageal continuity. However, these forms of esophageal repair are susceptible to failure. Additionally, cases exist where varied anatomy and previous surgery may preclude the application of these procedures. In such cases, jejunal interposition may be considered. “Supercharging” pedicled jejunal flaps allows for longer conduits, and serves to improve flap perfusion, healing, and function. Previous studies have questioned the feasibility of this intervention in a pediatric population. The purpose of this study is to describe the outcomes of pediatric patients who underwent supercharged jejunal interposition for esophageal reconstruction at our institution.

METHODS: We reviewed the records of patients who underwent esophageal reconstruction using supercharged pedicled jejunal (SPJ) flaps at our institution from 2013–2017.

RESULTS: Thirteen patients, aged 1.4–23.8 years, underwent esophageal reconstruction with SPJ flaps. Eleven patients had esophageal atresia and two developed esophageal strictures secondary to caustic ingestion. All had previously undergone failed attempts at restoring esophageal continuity. Patients have been followed-up for an average of 19.7 months. Reconstruction with SPJ flaps was laborious and technically demanding, taking an average of 11.8±3.1 hours. Most cases (92.3%) involved the microsurgical anastomoses of an internal thoracic artery and vein to jejunal arterial and venous branches, respectively. All patients were discharged with an intact SPJ flap, and there were no morbidities. For two children, the postoperative course was complicated by chest wall infections; another individual experienced small bowel obstruction. So far, four patients have required endoscopic stricture dilation, and one child has returned to the operating room for relocation of their jejunogastric anastomosis. Following reconstruction, patients were intubated for an average of 8.7±3.7 days, and monitored in the intensive care unit for a mean of 18.0±7.3 days. By postoperative day 50 (range, 15–50 days), all were able to meet their caloric needs enterally. Currently, eleven patients (84.6%) are tolerating oral feeds.

CONCLUSION: Although the complexity of SPJ flaps limits their widespread use, our group’s experience with this technique demonstrates the feasibility of this intervention in the pediatric population. When performed by an experienced, multidisciplinary team, this approach is reliable and should be considered for children with limited reconstructive options.