



# INTRODUCTION OF A NOVEL TECHNIQUE FOR MUCOSAL SUTURING OF THE NASAL SEPTUM IN ENDOSCOPIC ENDONASAL SURGERY: A STEP-BY-STEP DESCRIPTION

TANCREDO ALCANTARA; JEROLD JUSTO; JONATHAN CHAINEY; ARIANNA FAVA; TINGTING JIANG; THIBAUT PASSERI; SEBASTIEN FROELICH  
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## INTRODUCTION

Numerous reconstruction and closure techniques have already been described, mostly based on the use of the nasoseptal flap, defined by Hadad-Bassagasteguy, and later popularized by Kassam [15,19]. These techniques also carry their own morbidity that is usually related to flap integrity and complications associated to the recipient or donor site

## OBJECTIVE

We present an improved endonasal suturing technique for endoscopic endonasal surgery, which has been routinely used in our institution with satisfactory outcomes.

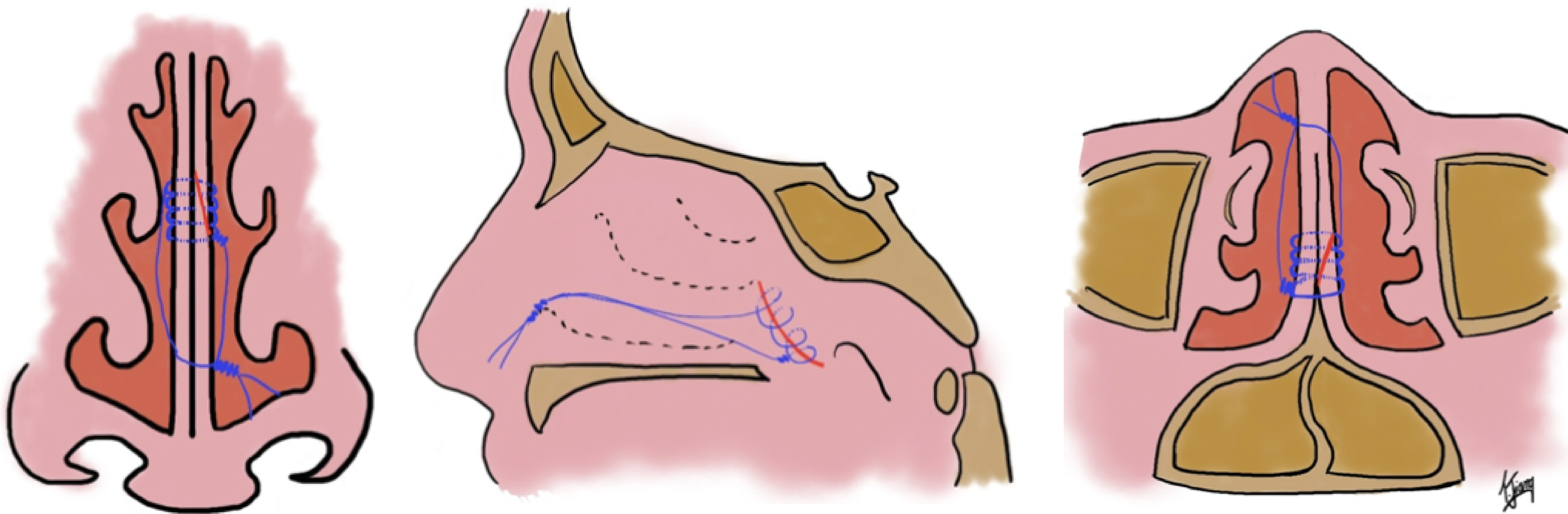
## METHODOLOGY

The technique was applied to a total of 27 patients who underwent clival and paraclival surgeries using a mononostril chopstick targeted clival approach.

## SUTURING STEPS

- **Anchor Suture:** From the left nostril, anchor the suture on the left mucosal leaflet's inferior segment using pituitary forceps.
- **Tighten Knot:** Perform three simple knots in the same direction, sliding them to the mucosal incision edges by pulling the post suture limb.
- **Secure Thread:** Hold the shorter thread outside the cavity with mosquito forceps.
- **Pass Through Mucosa:** From the left nostril, pass the suture through the left mucosal leaflet above the anchoring knot, then through the right mucosal leaflet/septum.
- **Right Nostril Transfer:** From the right nostril, grab the needle and pass it back through the nasal septum (right to left).
- **Inside-Out Pass:** From the left nostril, pass the needle through the left mucosal leaflet in an inside-out fashion and pull it outside to maintain tension.
- **Repeat Along Incision:** Continue passing the suture through the left mucosal leaflet and posterior nasal septum mucosa, repeating along the incision length.
- **Final Pass & Knot:** Once the incision is sutured, pass the needle in the right nostril superficially through the nasal septum into the left nostril. Tie the final knot in the nasal vestibule.

## SCHEMATIC DIAGRAM OF SUTURING TECHNIQUE



## RECOMMENDATIONS

We provide evidence that this proper closure of the surgical cavity can be performed safely and is associated with a low rate of nasal morbidity and reduced surgical footprint. Additional studies need to be done to verify the advantage of the technique over other methods more commonly used such as the naso-septal flap.

## CONCLUSION

Our technique emphasizes mucosal suturing with fixation to the septal cartilage, reducing manipulation of normal nasal structures and improving healing. This method, combined with fat grafting, dural substitutes, and fibrin glue, ensures effective closure while minimizing crust formation and the need for nasal washes.