

DRAF type III REVISION USING FLAPS AND STEROID-ELUTING STENT

INTRODUCTION

Draf type III is an endoscopic endonasal procedure which consists in creating a frontal common drainage pathway from one lamina papyracea to the other. The main concern of this procedure is the high rate of restenosis due to neo-osteogenesis and scar tissue formation lightened from the exposed bone. Several techniques have been introduced to prevent neo-ostium stenosis after Draf type III, ranging from flaps to free grafts, most of which are no more available in revision surgery due to previous harvesting or damaging. We describe an alternative novel lateral-based local flap to resurface the drilled bone combined with a steroid-eluting stent.

METHODS

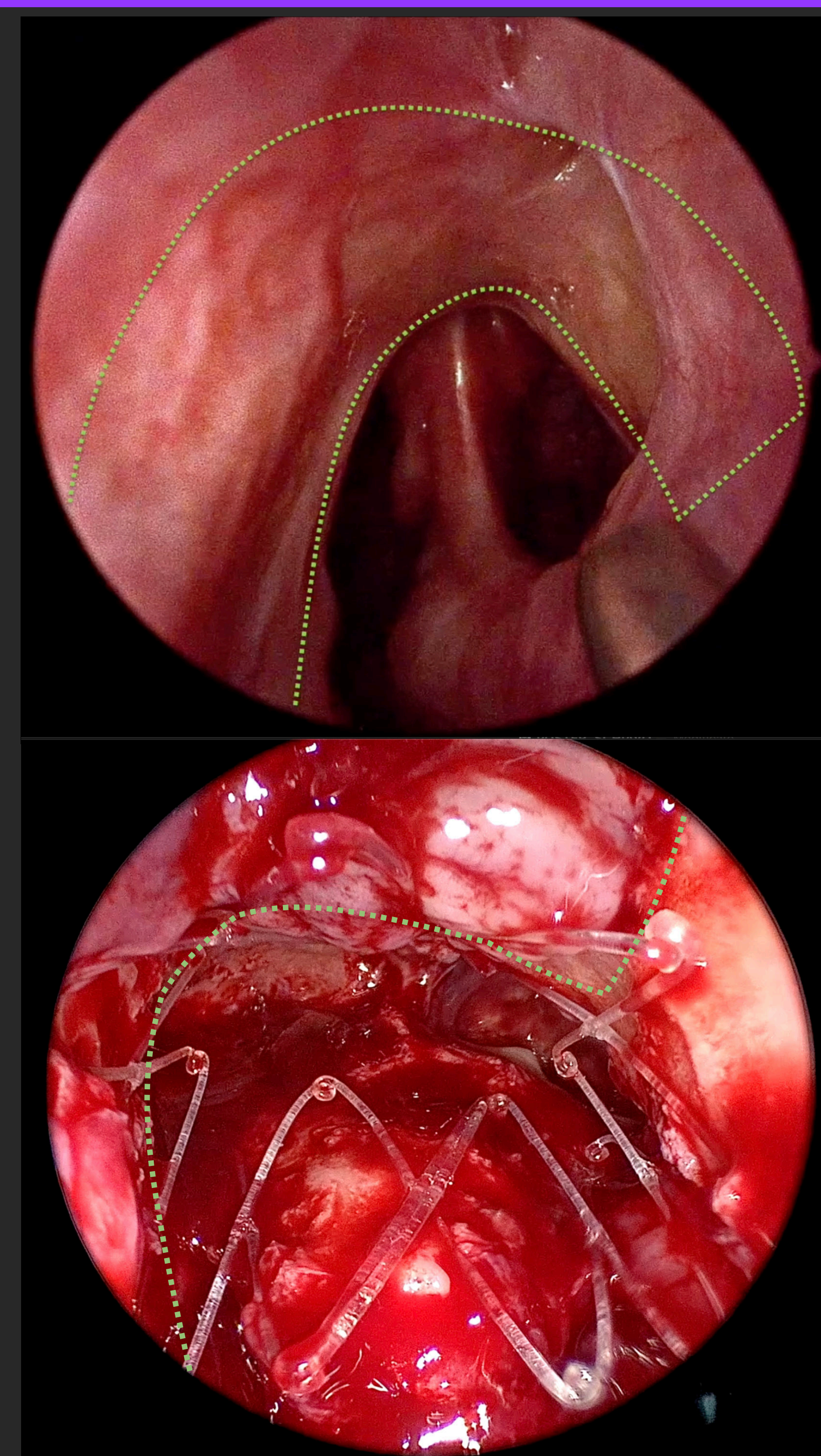
A retrospective observational analysis was performed in the ENT departments at Sant'Anna Hospital, University of Insubria, Como, Italy. A total of three patients fits the study's eligibility criteria between 2023 and 2024.

Lateral nasal wall-based flap technique:

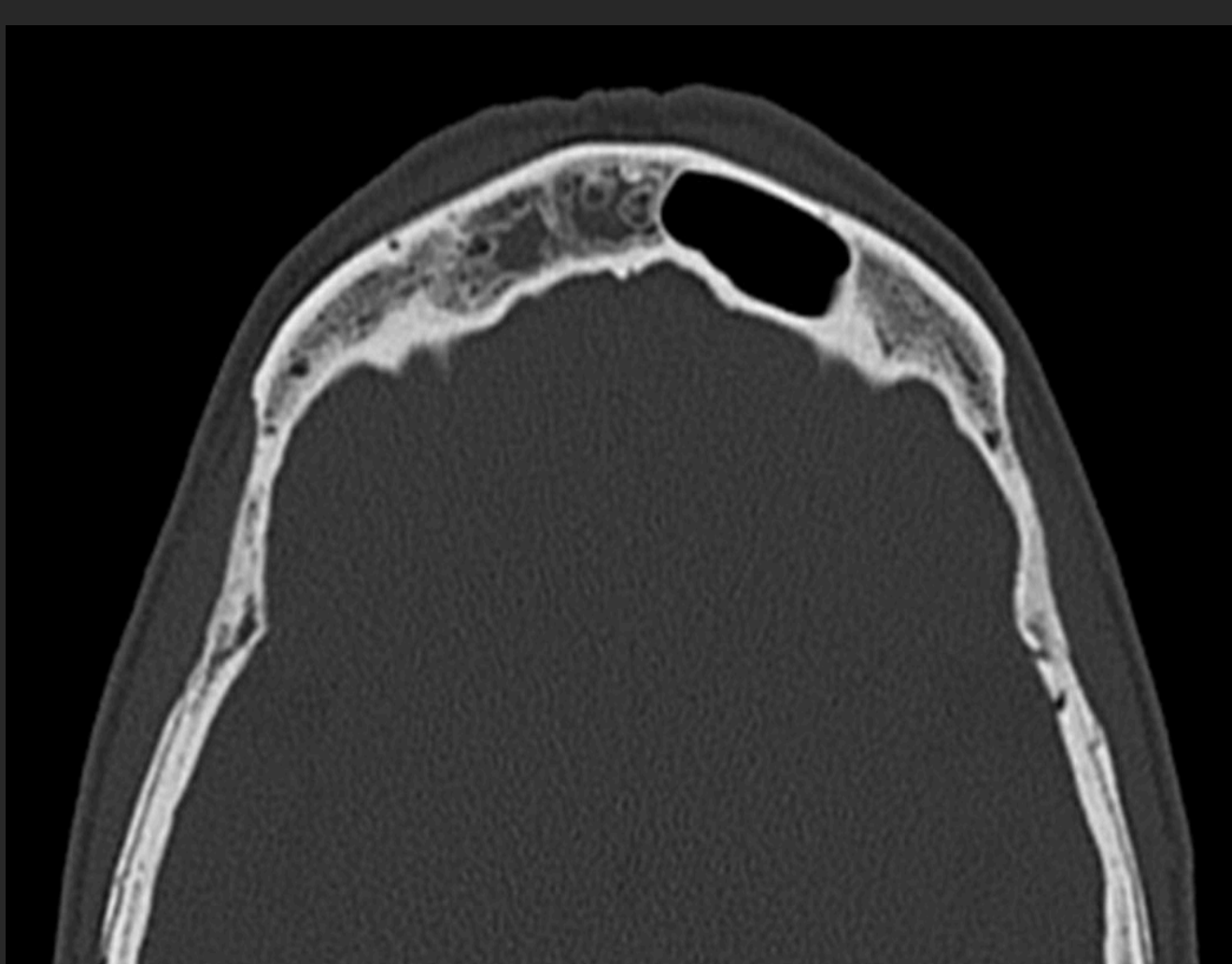
Two horizontal mucosal incisions (one anterior and one posterior) are performed on the neomucosa in front of the anterior margin of the previously performed DRAF type III. The flap is elevated from one side, leaving the pedicle random-based to the other side. The newborn bone, which closes the frontal drainage, is removed to restore ventilation of the frontal sinuses. The lateral-based U-shaped flap is turned upward to cover the drilled/exposed bone of the anterior circumference of the frontal neo-ostium.

Steroid-Eluting Stent

The final step is the positioning of the steroid-eluting sinus stent which has, in this case, a double function: first, to prevent the restenosis of the frontal sinusotomy by extended steroid release; second, to buttress and keep in place the flap.



RESULTS



The diagnosis of restenosis of the frontal sinus was made in the outpatient clinic with an endonasal endoscopy together with a maxillofacial CT scan. All three patients underwent revision endoscopic frontal sinus surgery and reconstruction with lateral-based flap and steroid-eluting stent. All patients experimented a gradual complete relief of initial symptoms. No patients reported complications or recurrence during these months of follow-up.

CONCLUSIONS

The use of a lateral-based flap composed of the scar tissue formed above the previous drilled bone could be a novel option to resurface the frontal neo-ostium and prevent the osteitic process induced by new exposed bone. The addition of the steroid-eluting stent enhances these effects of isolating the nidus of inflammation but also contrasts it with long steroid releasing; at the same time, it keeps the flap in the right position preventing its displacement. The stent stays in place till its complete resorption.