POST-RHINOPLASTY CEREBROSPINAL FLUID LEAK CAUSED BY INTRAOPERATIVE NASAL PACKING.

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INTRODUCTION

Cerebrospinal fluid (CSF) leak is a very rare complication of rhinoplasty. Typically, it occurs secondary to improper handling of the perpendicular plate of the ethmoid bone¹. Injuries have also been reported to the cribriform plate due to superior septal perforation during elevation of the mucoperichondrial flap using the Freer elevator². If left untreated, it can lead to devastating intracranial sequelae³. Here, we report a previously unrecognised cause of CSF leak attributed to injudicious nasal packing.

CASE

A 19-year-old female was referred to the senior author with left-sided, clear rhinorrhea one day post cosmetic rhinoplasty surgery (done elsewhere without noted intra-operative complication). Electrophoresis was positive for beta-2 transferrin. CT imaging suggested a possible left anterior ethmoidal roof defect (**Fig. 1**), with mucosal thickening of ipsilateral ethmoid and maxillary sinuses (**Fig. 2**).

Due to persistent rhinorrhea the patient was taken to theatre the next day for Endoscopic CSF leak repair. Intraoperatively, slight damage to the axilla of the middle turbinate was noted. This was followed to where the Tilley packing forceps had caused the skull base defect. A 5x15mm defect was detected with multiple fractures of thin bone at the roof of the Ethmoid. An uncinectomy and ethmoidectomy were performed.

The repair comprised two layers of DuraGen (Integra LifeSciences, Plainsboro, New Jersey, USA) and TISSEEL glue (Baxter Healthcare Corporation, Deerfield, Illinois, USA), quadrilateral cartilage, middle turbinate mucosa from the left side, further TISSEEL glue and Gelfoam (Pfizer, New York, NY, USA). Four pieces of Nasopore (Polyganics, Groningen, The Netherlands) were used to support the repair site. This multilayer technique has had reported success of up to 93% for primary repairs⁴.

FIGURE 1

Coronal CT scan of the sinuses demonstrating a left sided skull base defect

FIGURE 2

Coronal CT scan of the sinuses demonstrating left sided sinus opacity.

RESULTS

Following 48 hours of bed rest at 30 degrees with stool softeners and straining avoidance, the patient completed one week of co-amoxiclav. The patient remains well one year post-operatively.

CONCLUSION

This case is a pertinent reminder of the importance of nasal anatomy and an appreciation of the relationship to the skullbase is paramount when performing nasal packing.

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