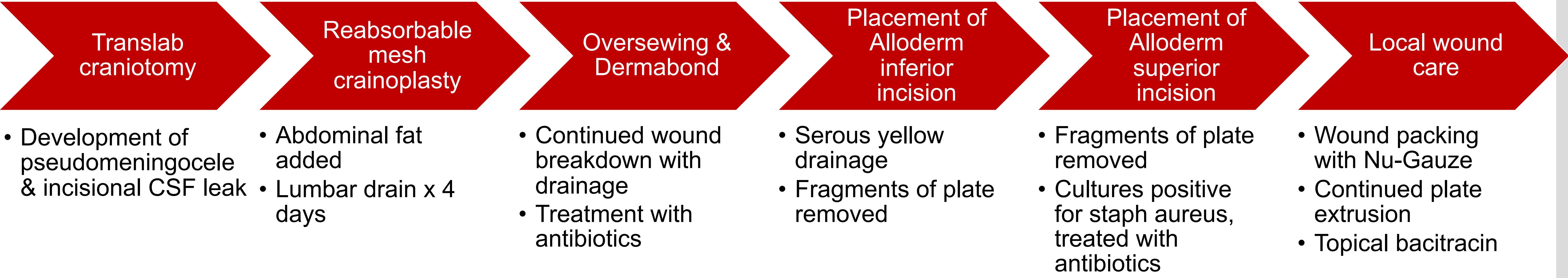




Plate Going Rogue? Delayed Wound Complications Following Reabsorbable Mesh Cranioplasty



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Introduction

Various materials and techniques can be implemented during cranioplasty to reconstruct calvarial defects following skull base surgery. These include methods using autologous tissue as well as various biocompatible and bioresorbable materials. One of these options is reabsorbable poly-(d,l)-lactide mesh. We present a case of delayed wound complication after a poly-(d,l)-lactide plate was used for cranioplasty following translabyrinthine craniotomy for vestibular schwannoma resection.

Material	Compatibility	Strength
Reabsorbable plates	Moderate	Low
Titanium mesh	High	High
Calcium Phosphate	High	Medium
Hydroxyapatite	High	Medium
Methyl Methacrylate	Moderate	High
Polyetherether-ketone (PEEK)	High	High

Table 1. Comparison of different cranioplasty materials compatibility and strength.



Figure 1. Extruding plate fragment present in postauricular wound.



Figure 2. Postauricular wound after 3 months wound care.



Figure 3. Postauricular wound after 18 months wound care.

Methods

A poly-(d,l)-lactide plate was secured lateral to an abdominal fat graft placed in the craniotomy defect following resection of a vestibular schwannoma via a translabyrinthine approach. Routine postoperative care and follow-up were implemented.

Results

The patient’s postoperative course was complicated by development of a pseudomeningocele managed by placement of more abdominal fat and a lumbar drain. Approximately 3 weeks later, the patient presented with a pinpoint dehiscence of the postauricular incision and concern for fat necrosis. The patient presented with repeated episodes of postauricular wound breakdown with visible auto extrusion of plate fragments that were managed in various ways.

Conclusion

Multiple materials can be utilized in cranioplasty including titanium mesh, calcium phosphate, tetra-calcium phosphate, hydroxyapatite, and methyl methacrylate. A resorbable plate is also a reconstructive option. In this case, the repetitive nature of the patient’s wound breakdown and the clinical appearance of the incision at each occurrence all pointed toward an adverse reaction to the resorbable plate. Rejection of a poly-(d,l)-lactide resorbable plate has not previously been described as a complication following lateral skull base cranioplasty. This case highlights the need to consider rejection, or bio-incompatibility, in cases where recurrent wound breakdown is encountered postoperatively which can guide more effective early wound management in this setting.

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