

ADHESIVE SEALANT BIOMATERIALS

Clinical Series

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Use of TissuePatchDural™ for closure of the Dura following Parietal Craniotomy and insertion of Gliadel wafers

Pre-operative status

A 58-year-old male presented with recurrence of a high-grade malignant Glioma requiring further intervention, involving left parietal craniotomy and tumour debulking followed by insertion of Gliadel wafers.

Surgical procedure

The patient was positioned on his right hand side. The original suture line was dissected and an existing bone plate removed. This being a reintervention, the dural tissue was slightly thickened but substantially intact. Following debulking of the tumour, a number of Gliadel wafers (7.7mg Carmustine) were used to line the resection cavity surface (figure 1) in accordance with the guidance provided by the manufacturer, Eisai Inc. The Dura was closed using interrupted sutures. No dural substitutes were used during closure of the Dura (figure 2).

Treatment with TissuePatchDural™

A 50x50mm TissuePatchDural™ (TD-02) was used without cutting to shape, and was applied as per instructions for use. During placement, the patch rapidly conformed to the contours of the underlying tissues and provided an immediate and effective seal to CSF leakage adjunctively to suture closure (figure 3).

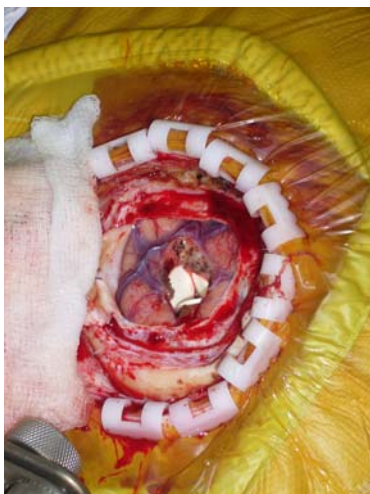


Figure 1 Gliadel Wafers following insertion

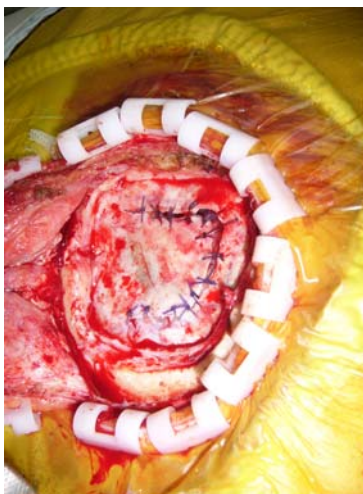


Figure 2 Dura closed with interrupted sutures

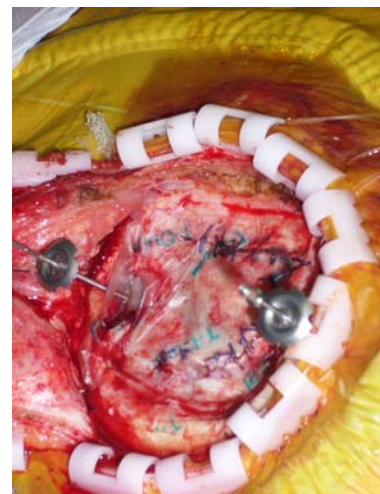


Figure 3 Sutured dural flap covered with sealant film

Summary

The use of TissuePatchDural™ ensured the water tight closure of the dura. Postoperatively the patient recovered well, was discharged without any CSF leak and went on to receive a course of chemotherapy treatment.

Surgeon opinion of TissuePatchDural™

TissuePatchDural™ is available on demand, requiring no advance preparation. The product was easy to use, rapidly conforming to the tissue surface and adhering to provide a fluid tight seal within 30 seconds. The product appears to be a very useful adjunct to suture closure of the Dura, especially important in cases such as this where it is imperative to prevent leakage of these aggressive chemotherapy drugs.

Note

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GLIADEL® (polifeprosan 20 with carmustine implant) Wafer is a registered trademark of Eisai Corporation of North America.