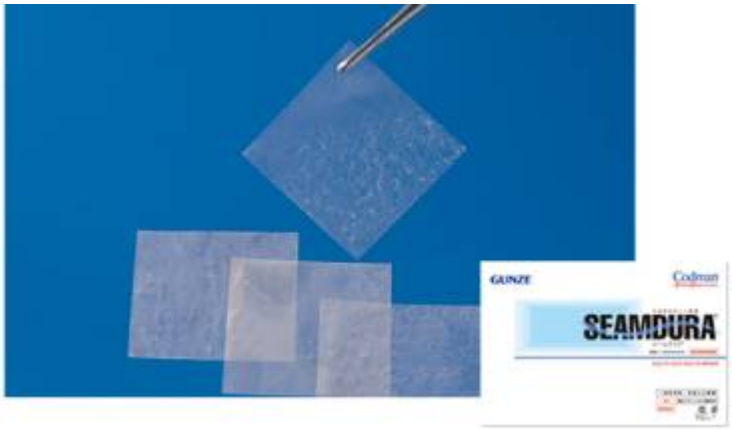
SEAMDURA



SEAMDURA is an absorbable artificial dural substitute made of P(LA/CL) (Poly(Llactideaand ε-caprolactone) copolymeric film layered with PGA (Polyglycolic acid) felt to give strength, elasticity and a leak resistant seal.

SEAMDURA is degraded gradually by hydrolysis and is completely absorbed in approximately 8 months. As SEAMDURA degrades in the body, it's collagen layer is replaced by dural material. Unlike non-absorbable dural material, when using SEAMDURA there is no risk of reactions from foreign bodies. The three layered structure that combines flexibility and elasticity is effective to close suture holes. Because of the semi-transparency of the product the condition of the brain's surface can still be observed after suturing.

In the Yoshida Hospital, Kobe, 46 patients underwent brain tumor extirpation with duraplasty with an artificial dura substitute; Gore-Tex and SEAMDURA were used as the artificial dura substitutes. Patients with postoperative intracranial hemorrhage after brain tumor extirpation with duraplasty with an artificial dura substitute were retrospectively analyzed. Moreover, suture strength was compared experimentally between Gore-Tex and SEAMDURA.

In patients who underwent brain tumor extirpation with duraplasty with an artificial dura substitute, the rate of postoperative hemorrhage was 8.6%. Epidural and subdural hematomas were seen in four patients after tumor extirpation with duraplasty with SEAMDURA, but there were none with Gore-Tex. Exposure of the superior sagittal sinus at craniotomy, older age, and longer operative time were seen more frequently in patients with hematoma than in patients without hematoma. The strength of the suture point was significantly weaker with SEAMDURA than with Gore-Tex ($P = 0.00016$).

Postoperative epidural and subdural hematomas seem to be specific for SEAMDURA and may be caused by the weak suture strength of SEAMDURA. In cases of duraplasty, a nonabsorbable artificial dura substitute may be suitable [1].

1)
Matsumoto H, Minami H, Yamaura I, Yoshida Y. Postoperative subdural hematoma with blood flow from an epidural hematoma through a tear at the suture point of an artificial dura substitute. Acta Neurochir (Wien). 2019 Apr;161(4):755-760. doi: 10.1007/s00701-019-03830-7. Epub 2019 Feb 14. PubMed PMID: 30762126.