Avoidance of CSF leak after Microvascular Decompression with Clinical Use of a New Synthetic Adhesive Film

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Tissue-Patch Dural - Tissuemed

TPD is a sterile, self-adhesive, absorbable surgical sealant and barrier. It is a multilayered device comprising alternate layers of poly(lactide-co-glycolide) and a proprietary “Terpolymer”. Poly(lactide-co-glycolide) is a resorbable membrane that provides reliable strength for temporary wound support.
Materials and Methods

100 consecutive patients who underwent MVD surgeries for hemifacial spasm or trigeminal neuralgia at our Institute were enrolled into this study.

- 50 cases: no adhesive material
- 50 cases: TPD
Intraoperative images

Microsuture with interposition of Muscle fragments (standard closure)

T-dural placement
Intraoperative images

Wet cottonoids and 2 minutes digital compression to obtain T-dural adhesion

Final result after T-dural adhesion with watertight closure
Results

STANDARD CLOSURE
(microsuture with interposition of muscle fragments)

CSF leaks: 2
(Both required surgical revision after failure of 4 days of spinal drainage)
Infection: 1

STANDARD CLOSURE + T-DURAL
(microsuture with interposition of muscle fragments + t-dural)

CSF leaks: 0
Infection: 1
Conclusions

• Despite the lack of any statistically significance between the two groups, this new adhesive material seems to be a promising way to prevent CSF leaks

• Further investigations on a larger number of patients and high risk surgical procedures for CSF leak still need to be performed