Modified technique for primary dural closure in the lateral suboccipital approach: Dural moisturizing with fibrin glue coating. [Japanese]

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Abstract:

Objective: When employing the lateral suboccipital approach, the thin dura shrinks due to the drying effect of illumination and air exposure, and dural substitutes are often needed for closure. We developed a new technique involving dural moisturizing with fibrin glue coating that facilitates primary dural closure. Patients and Methods: We used this technique in 12 adults who underwent the lateral suboccipital approach for 5 hemifacial spasms, 3 trigeminal neuralgias, 2 cerebellopontine meningiomas, 1 vestibular schwannoma, and 1 vertebral artery aneurysm. Fibrin glue was sprayed on the outer surface before opening the dura, and additionally sprayed on the inner surface of the reflected dural flap after opening the dura. After the intradural procedures the dura was closed with the usual knotted sutures. Results: Dural closure was performed 65-340 minutes (mean: 161.9 minutes) postdurotomy. This technique resulted in primary dural closure with a sufficient area of preserved dura in all but one patient. In this patient, the dura shrank due to coagulation of the dural attachment to the meningioma for which a small autologous substitute was required. There were no procedure-related complications such as cerebrospinal fluid leakage and meningitis. Conclusions: Dural moisturizing with fibrin glue coating is simple, protects the dura from drying and shrinkage, and facilitates primary dural closure in patients undergoing the lateral suboccipital approach.