[A novel method of dural repair using polyglycolic acid non-woven fabric and fibrin glue: clinical results of 140 cases]. [Japanese]

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Abstract:

This paper presents a report based on the results obtained from clinical applications of a biocompatible dural substitute made of polyglycolic acid non-woven fabric and fibrin glue. The cases subjected to this study were the ones needing reconstruction of dura mater which had become defective due to injury or brain tumor and the ones in which primary suture of the dura mater was considered to be too difficult or inadequate with ordinary methods. The dural substitute was used in 140 cases during the period between June, 2001 and July, 2005. The operations were performed using the supratentorial approach in 66 cases and infratentorial approach in 74 cases. Among these procedures, 39 cases were indicated for microvascular decompression, the commonest operation performed, then cranial base surgery in 27 cases and tumor resection in 24 cases, and so on. Lumber spinal fluid drainage or re-operation was required in 3 cases (2.1%) due to formation of post-operative cerebrospinal fluid leakage or subcutaneous accumulation of cerebrospinal fluid. With the dural substitute no infection was observed as a complication in any of the cases. Among the 140 cases presented this time, 27 cases were cranial base surgery and 74 cases were performed, using the infratentorial approach. Nevertheless, the study showed that the closing ability of the dural substitute was adequate even in actual clinical settings it is reported above that the incidence rate of post-operative cerebrospinal fluid leakage or subcutaneous accumulation of cerebrospinal fluid which require additional intervention was only 2.1%.