

Balloon-Assisted Fistula Sealing Procedure for Symptomatic Tarlov Cysts.

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Abstract:

OBJECTIVE: Tarlov cyst is an abnormal expansion of the spinal nerve sleeve, and it communicates with the subarachnoid cavity via a perineural fistula. This study presents our experience of a balloon-assisted fistula sealing procedure in treating Tarlov cyst.

METHODS: Twenty-two patients with symptomatic Tarlov cysts were surgically treated. An emulsion balloon was placed into the lumbar subarachnoid cistern through a trocar, so as to temporarily block cerebrospinal fluid flow, then the thecal sac was opened and the inlet of the fistula was sealed by suture of a muscular patch and reinforced by fibrin glue. Finally, the cyst wall was imbricated and the bony cavity was filled with pedicled muscle flaps.

RESULTS: Comparing the preoperative and postoperative pain scores according to visual analog scale, 2 patients were slightly improved and 18 patients were substantially improved, including 3 completely pain-free cases. Only 2 patients were unchanged in pain, and both of them had multiple cysts. As a whole, the postoperative pain score was much better than the preoperative score (2.4 vs. 7.5; $P < 0.01$). Bladder weakness was slightly improved, and bowel dysfunction was almost unchanged after operation. During follow-up, cyst recurrence was found in 1 patient.

CONCLUSIONS: The balloon-assisted fistula sealing procedure is safe and effective for Tarlov cyst, especially for the single cyst. It is a good complement to the cyst wall imbricating procedure.

