



Results of the Endoscopic Endonasal Repair of the Patients with Spontaneous CSF Rhinorrhea

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Introduction

Numerous factors underlay development of spontaneous nasal liquorrhea (SNL), what requires a differentiated approach to each patient in order to improve the effectiveness of treatment, reduce the risk of recurrence

Methods

The study included 59 patients (54 female) aged 18-75 years (mean age 50,2 years) with SNL treated in our Institute during the last 20 years. Fifty-six (48,3%) patients underwent endoscopic intervention, followed by external lumbar drainage, three (2,6%) – in combination with lumboperitoneal shunt. For fistula closure auto tissues were mainly used: fascia lata in combination with different plastic materials (often with fatty tissue, cartilage of the nasal septum). Various types of thrombin-fibrin glue were used for auto tissue fixation.

Results evaluation was based on dynamic follow-up study in neurosurgical and ENT departments, patient questionnaires. Surgery was ranked as effective if no CSF leak, meningitis and neurological status deterioration was noted in postoperative period.

Results

Good results were obtained in 45 (76,3%) patients after primary endoscopic surgery. Leakage site was clearly detected in 44 (74,6%) of 59 patients, with 3 patients (5,1%) revealing two fistulas each. The leakage site was most commonly located in the lamina cribrosa (47,5%), sphenoid sinus (28,8%) and ethmoidal cells (15,2%). Combinations of different leakage site were significantly rare. In most cases (32,2%) fistula size did not exceed 7 mm. Meningoencephalocele was marked in 57,6%, confirmed by biopsy – in 52,9% (18 of 34 patients).

CSF leakage recurrence (23,7%) and was linked to the fistula site (sphenoid sinus (35,7%), lamina cribrosa (35,7%), as well as in their combinations). There is no recurrent CSF leak after 4 years after primary surgery. Recurrence was caused by: difficulties in identifying the defect, high CSF pressure, leakage time, comorbidities (metabolic syndrome, osteopenia / osteoporosis in women aged 37-75 years). In 2 (3,4%) patients the early postoperative period was complicated by meningitis.

Conclusions

Endoscopic endonasal repair of the SNL is indicated when the fistula located in the area of the sella turcica, sphenoidal sinus, ethmoidal bone and lamina cribrosa. The effectiveness of the surgery depends on the number, side and size of fistulas, presence of the meningocele.

Learning Objectives

"By the conclusion of this session, participants should be able to describe the importance of endoscopic endonasal repair of the patients with spontaneous CSF rhinorrhea

References

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