New technique for the endoscopic treatment of CSF fistulas

Juan C. Chaparro Morante, MD1,2,4; Alberto Trelles, MD1,3; Mónica Hidalgo Venegas, MD1,3,4; Angel Chaparro Morante, MD1,4

1 Clínica Internacional, 2 Hospital Nacional Arzobispo Loayza, 3 Hospital Nacional Daniel A. Carrión, 4 Universidad Nacional Mayor de San Marcos Lima - Perú

INTRODUCTION

The CSF leakage into the nasal cavity is defined as a tear of the arachnoid and the dura associated to a bone defect by which drains cerebrospinal fluid. This allows a communication of the subarachnoid space with the upper respiratory tract, thus increasing the risk of ascending meningitis up to 40%.

The CSF fistulas can be traumatic and nontraumatic etiology. The nontraumatic high pressure fistulas can be caused by tumors, hydrocephalus or benign intracranial hypertension. The nontraumatic normal pressure fistulas, by inflammatory, infectious, by birth defects like agenesis of the floor of the anterior fossa, arachnoid granulations, empty sphenoid and ethmoid cells.

The traumatic fistulas can be iatrogenic and spontaneous etiology. The traumatic fistulas by sinus surgery are important in the otolaryngologist’s practice, whose causes are for surgeon’s anatomical disorientation, loss of anatomy by inadvertent changes, expanding lesions or previous surgery. Most common sites of non-traumatic fistulas are the cribiform plate, frontal area, and the spheno- and ethmoid cells.

The classic presentation is unilateral watery continuous or intermittent rhinorrhea especially associated with the Valsalva maneuver and cefalea.

The objectives were: 1. Report our experience and surgical treatment using a new endoscopic technique for closure of CSF fistulas of different etiologies. 2. Hypothesis of the treatment of CSF fistulas, thus avoiding craniotomy and its sequelae.

METHODS AND MATERIALS

Case report of 5 adult patients with spontaneous CSF fistulas treated by endoscopic endonasal surgery from July to December 2011, all patients had CSF fistulas of different etiologies, covered by sterile sponge. Outcome measurement was presence of absence of liquorrhea.

RESULTS

After nasal packing in place for five days, controls were carried out at the time of endoscopic nasal packing out and then weekly. In all cases showed the fistula closure at 6 weeks by the endoscopy in its controls. This technique showed the absence of liquorrhea in 5 cases. There was no recurrence or any complications (Fig. 8).

CONCLUSIONS

The endoscopic closure of CSF fistulas with the technique of cartilage and mucoperichondrium from tragus has proved a very safe method for this type of defects in the skull base as well as being reliable, secure and free of sequelaes as presented in the craniotomies.

REFERENCES