Sylvian fissure arachnoid cyst treatment

Type I Galassi classification of middle cranial fossa arachnoid cysts are best treated by microsurgical fenestration.

Type II and III are accessed via endoscope. The appearance of the chiasmatic cistern and interpeduncular cisterns on magnetic resonance imaging (MRI) helps to decide between endoscopic and microsurgical fenestration. Endoscopic cystocisternotomy is advocated when there is ample space between the third cranial nerve and the tentorial notch and between the optic nerve and the carotid artery within large cisterns with thin membranes, while microsurgical techniques remain a suitable option in cases of fenestration of deep thicker membranes in the vicinity of vital structures.1)

Various factors have to be considered before performing endoscopic fenestrations into the basal cisterns. The medial wall of the cyst is coursed by the arterial vessels of the Sylvian fissure that can be damaged when stoma is enlarged with sharp instruments. Moreover, the membranes of these cysts are difficult to penetrate due to their rich collagen content, so a sharp instrument or scissors are often used [18].

The literature related to middle fossa cyst treatment is not as diverse or as reliable as it is for other types of cysts.

A meta-analysis concluded that while all three surgical methods (endoscopic, microsurgical, and shunting) are effective for the management of middle fossa cysts, endoscopic fenestration is the preferred primary surgical modality. The latter two options should only be considered when symptoms are unchanged after endoscopic treatment [19].

1)
