Endoscopic Views Inside a Suprasellar Arachnoid Cyst

Imagens Endoscópicas em Cisto Aracnoide Suprassellar

Roberto Alexandre Dezena

RESUMO
Neste artigo apresentamos imagens endoscópicas no interior de um cisto aracnoide suprassellar.
Palavras-chave: Endoscopia; Suprassellar; Cisto aracnoide

ABSTRACT
In this article, we show the endoscopic views within a suprasellar arachnoid cyst.
Key-words: Endoscopy; Suprasellar; Arachnoid cyst

Suprasellar arachnoid cysts are congenital benign collections of cerebrospinal fluid, comprising approximately 9% of all arachnoid cysts. These cysts progressively enlarge from an abnormality in the interpeduncular cistern or of the Liliequist membrane. It can be classified in communicating cyst, that is a cystic dilatation of the interpeduncular cistern, and in non-communicating intra-arachnoid cyst of the diencephalic portion of the Liliequist membrane. Endoscopic neurosurgery is the best surgical approach, mainly in patients with associated hydrocephalus. There are two main types of endoscopic surgical procedures: ventriculocystostomy, in which the goal is to establish communication between the cyst cavity and ventricles, and ventriculocystocisternostomy, in which the goal is to open the cyst into both the ventricles and cisterns. The latter being the best choice. Typical aspect of MRI is depicted in Figures 1 and 2. Endoscopic views inside the cyst during a ventriculocystocisternostomy are showed in Figure 3 to 8.

Figure 1. Axial T1-weighted MRI showing a typical suprasellar arachnoid cyst and hydrocephalus.

Figure 2. Sagittal T2-weighted MRI showing a communicating suprasellar arachnoid cyst.
Figure 3. A. Thalamoperforating arteries; B. right oculomotor nerve – CN III; C. right cerebral peduncle; D. tegmentum of mesencephalon; E. left cerebral peduncle.

Figure 4. A. dorsum sellae; B. Liliequist membrane – mesencephalic portion; C. right posterior communicating artery; D. right posterior cerebral artery (P1); E. bifurcation of the basilar artery; F. left posterior cerebral artery (P1); G. left posterior communicating artery.
Figure 5. A. right posterior communicating artery; B. right oculomotor nerve – CN III; C. right posterior cerebral artery (P2); D. right cerebral peduncle; E. thalamoperforating arteries; F. right posterior cerebral artery (P1); G. bifurcation of the basilar artery; H. left posterior cerebral artery (P1); I. Liliequist membrane – mesencephalic portion.

Figure 6. A. Liliequist membrane – mesencephalic portion; B. right posterior cerebral artery (P1); C. bifurcation of the basilar artery; D. left posterior cerebral artery (P1); E. thalamoperforating arteries; F. left posterior cerebral artery (P2); G. left anterior thalamoperforating or premammillary arteries; H. left posterior communicating artery.
Figure 7. A. sellar diaphragm; B. pituitary stalk; C. pituitary gland; D. dorsum sellae; E. Liliequist membrane – mesencephalic portion; F. left posterior cerebral artery (P1); G. left posterior cerebral artery (P2); H. left anterior thalamoperforating or premamillary arteries; I. left posterior communicating artery; J. posterior clinoid process; K. left middle cerebral artery – M1; L. left internal carotid artery.

Figure 8. A. pituitary stalk; B. pituitary gland; C. sellar diaphragm; D. dorsum sellae; E. Liliequist membrane – mesencephalic portion; F. posterior clinoid process.
REFERENCES


CORRESPONDING AUTHOR

Roberto Alexandre Dezena, MD, PhD
Universidade Federal do Triângulo Mineiro
Professor of Post-Graduation Program in Health Sciences
Professor of Post-Graduation Program
in Applied Bioscience
Supervisor of Medical Residency Program, Neurosurgery
Uberaba, MG
E-mail: rdezena@yahoo.com.br