



Minimally invasive transoccipital horn approach to symptomatic atrial cysts

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Introduction

Cystic lesions in the atrium (trigone) of the lateral ventricle may become symptomatic due to obstruction of physiological cerebrospinal fluid (CSF) circulation and/or from mass effect on adjacent structures. A minimally invasive approach that not only allows for straightforward access to multiple regions of the atrial cyst wall but also enables direct inspection of the entire lateral ventricular system has not been elaborated. Thus we describe our experience with the stereotactic endoscopic transoccipital horn approach for treating cystic lesions in the atrium of the lateral ventricle.

Methods

A retrospective review of all patients who underwent endoscopic surgical treatment for cysts in the atrium of the lateral ventricle between 1999-2010 was performed.

Results

The cohort consists of thirteen consecutive patients who presented with symptomatic lateral ventricular entrapment due to the presence of an atrial cyst. There were 9 male and 4 female patients ranging in age from 4 months to 54 years. Headache was the most common complaint at presentation. The transoccipital horn approach facilitated successful cyst reduction and fenestration in all cases. Temporal and occipital horn entrapment was reversed in all cases with reestablishment of a physiological CSF flow pattern throughout the ventricles. Hydrocephalus was also reversed in all patients presenting with this neuroimaging finding at presentation. No cyst or ventricular entrapment was seen to recur during a mean follow-up of 26 (range 2-66) months. No patient in the study cohort required repeat surgery or permanent CSF diversion post-operatively.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the stereotactic endoscopic transoccipital horn approach, 2) Appreciate the benefits of treating symptomatic atrial cysts using this approach, and 3) Discuss the role of minimally invasive endoscopic surgery in the management of patients with atrial cysts.

Conclusions

Stereotactic surgery utilizing an endoscopic transoccipital horn approach represents a safe and effective treatment strategy for patients with symptomatic atrial cysts of the lateral ventricle. Using this minimally invasive approach, all poles of the lateral ventricular system can be visualized and the unobstructed flow of CSF can be confirmed after cyst resection obviating the need for additional diversion.