

Endoscopic Removal of Colloid Cysts and its Significance

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Received: 19 Mar 2022

Accepted: 04 Apr 2022

Published: 09 Apr 2022

J Short Name: JCMI

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Keywords:

Endoscopic; Microscopic; Choroid plexus

Citation:

Tayyab H, Endoscopic Removal of Colloid Cysts and its Significance. J Clin Med Img. 2022; V6(5): 1-4

1. Introduction

Endoscopic surgery has truly revolutionised the surgical management of colloid cysts. Their central and deep location within the third ventricle has historically demanded a great degree of surgical skill and demand on the patient. Endoscopic excision of colloid cysts is currently well established as a minimally invasive and highly effective technique associated with less morbidity in comparison to microsurgical resection.

Colloid cysts are benign, congenital epithelium-lined cysts that almost always arise in the anterior third ventricle. Colloid cysts of the third ventricle are located at the level of the foramina of Munro and are attached to the roof or floor, fornix, or the choroid plexus. Sizes range from few mm to several cm. Histology consists of pseudo stratified columnar or cuboidal epithelium. Treatment options for removal of colloid cysts are Microscopic trans-cranial approach, Endoscopic aspiration/ excision and Stereotactic aspiration but the preference of endoscopy is more because of the cystic nature of colloid cyst component leading to sufficient space for endoscopy and also the associated complexity with standard microsurgical procedure [2].

2. Objective

Removal of colloid cysts using an endoscopic method has been established as a safe and advantageous technique. This minimally invasive endoscopic procedure is brief (one to two hours) and usually requires just a two-day hospitalisation. The aim of this study was to assess the feasibility and long-term outcomes of using a purely endoscopic approach for the management of colloid cysts.

3. Methods

We did a retrospective study of two-year duration on 11 patients presented with colloid cysts to assess the significance of standard LOTTA endoscopy. The inclusion criteria for patients were those with colloid cysts, having enlargement of the ventricles and size greater than 1cm. All patients had histologically confirmed colloid cysts of the third ventricle, and complete resection of the lesion was confirmed radiologically in all patients. Total to near-total excision was done in 8 (72.7%) patients and evacuation of the cyst with partial excision was done in 3 (27.2%) patients.

4. Results

The results were significant as 10 (90.9%) improved completely postoperatively and only one (9.1%) patient who had visual deterioration did not improve after surgery (Figures 1-7).

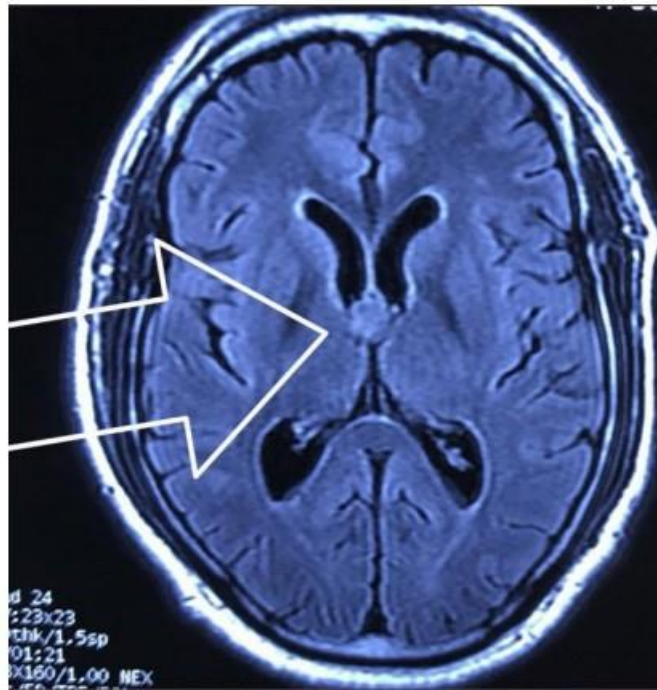


Figure 1: Axial MRI T1 shows colloid cyst foramen of monro

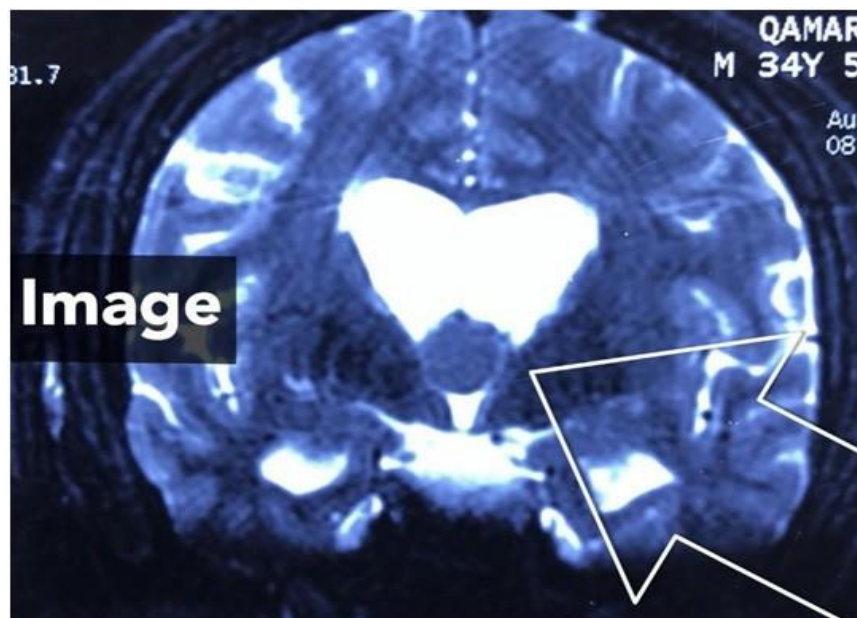
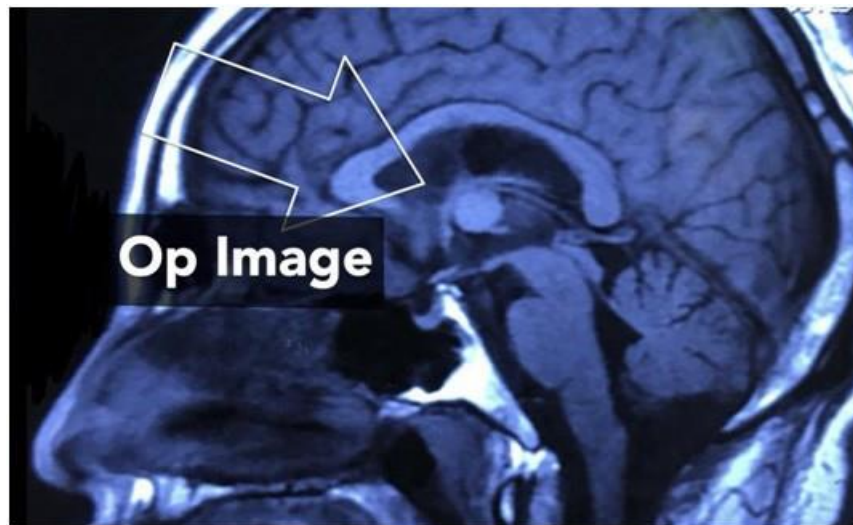


Figure 2 and 3: Sagittal MRI T1 and Coronal MRI 2 shows lesion in anterior third ventricle.

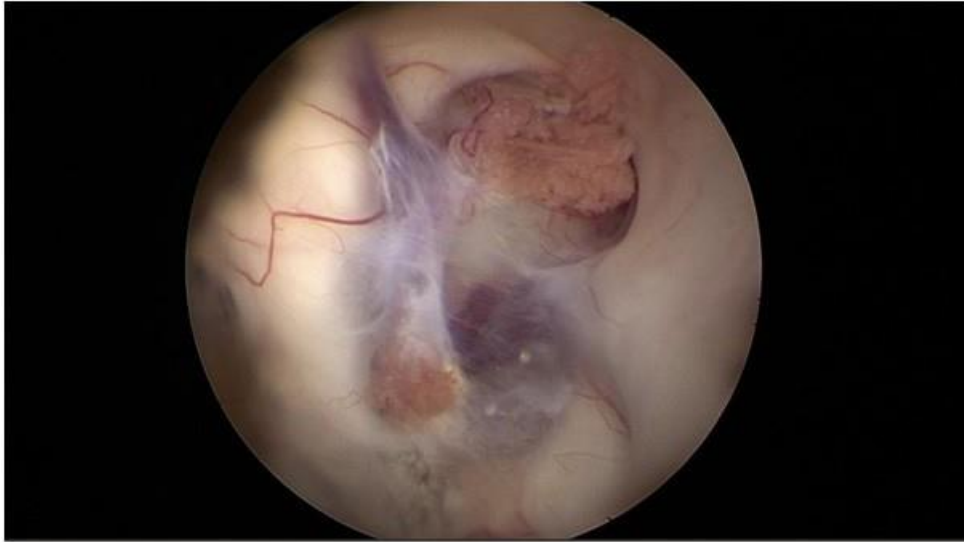


Figure 4: Endoscopic View of Foramen of monro with Choroid plexuses and the colloid cyst.



Figure 5: Coagulation of choroid plexuses.



Figure 6: Suctioning of colloid cyst content with clear cannula.

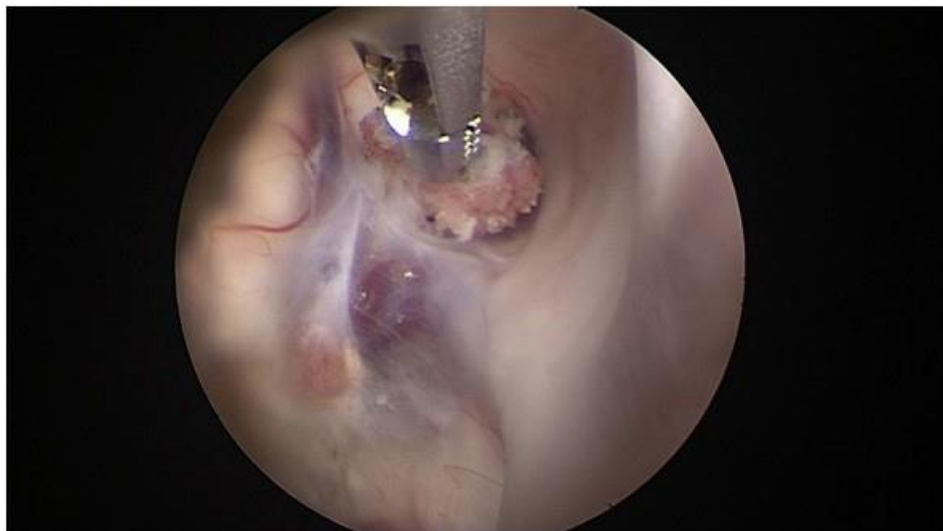


Figure 7: Grasping of colloid cyst capsule.

5. Conclusion

Our verdict was that endoscopy is a safe, minimally invasive and effective procedure with good optical resolution and high magnification [3,4]. While it may require a longer learning curve still, there is rapid resolution of symptoms and low direct surgical morbidity which marks the importance of endoscopy. Benefits associated with endoscopic removal have been reported for length of stay, operating times, and peri-operative complications [1]. Factors such as the presence of symptoms and the size of the cyst must be taken into account when deciding the need for endoscopy. Moreover, the Weill Cornell Medicine Brain and Spine Center, Dr. Mark Souweidane has performed this endoscopic procedure more than 170 times, making him one of the world's leading experts on colloid cysts.

6. Acknowledgements

I am grateful to all the doctors of the Department of Neurosurgery of Punjab Institute of Neurosciences, Lahore for their support.

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