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ENDOSCOPIC MARSUPIALIZATION OF FRONTO ETHMOIDAL MUCOCELE

Abstract:

Mucocele is a chronic, expansile, benign cystic lesion of the mucosa of the paranasal sinuses, with thick translucent mucous secretions. Although considered a benign lesion, the expansile character of the mucocele promotes slow erosion of the adjacent bone due to compression and consequent bone absorption. Fronto ethmoidal mucoceles are ideal cases for endoscopic marsupialization. Sharing here is the experience of 15 cases of endoscopic marsupialization of fronto ethmoidal mucocele without use of stent.

Key words: Fronto ethmoid mucocele, Endoscopic marsupialization.

Mucocele is a chronic, expansile, benign cystic lesion of the mucosa of the paranasal sinuses with thick translucent mucus secretion. It is believed that this disease is secondary to obstruction to sinus drainage leading to stagnation of the secretion within the cavity. The predisposing factors can be fractures, mucosal oedema, polyps, tumors, surgical trauma and chronic sinusitis. Mucoceles are classified according to the sinus of origin. The frontal sinus is the most common site, followed by the ethmoid, maxillary and sphenoid sinus. Fronto ethmoid and sphenoid sinus mucoceles are ideal cases for endoscopic marsupialization. Mucoceles accessible with the endoscope should be opened as widely as possible using through cut forceps, in order to minimize the amount of scar tissue that forms around the edges and which might lead to recurrences. Coronal CT Scan is helpful to show whether the lesion can be approached via the nasal cavity and also to know whether the lesion is uni or multilocular. In the frontal sinus, lateral extension of the mucocele may be difficult to access by endoscopic alone and may need combined approach.

Except for few patients, most of the patients were referred from the department of Ophthalmology as they presented with proptosis. Thorough clinical examination including endoscopic examination of the nasal cavity was done. All patients underwent CT Scan evaluation by both coronal and axial sections. This helped us to know the exact location and extension and the bony erosion by the mucocele like lamina papyracea, roof of the frontal sinus or lateral extension into the frontal sinus. Patients were admitted one day prior to operation and intravenous antibiotic was started. Surgery was performed under general anesthesia. 2% xylocaine with adrenaline was injected at the axilla of the middle turbinate and on the ethmoid bulla. Adrenaline pack was kept in the middle meatus. Initially 0 degree endoscope was used. Uncinectomy was done using backbiting forceps and middle meatal antrostomy was performed. Bulla was opened inferomedially, proper anterior ethmoidectomy was performed. Basal lamella of the middle turbinate identified and punctured to enter the posterior ethmoidal cells. Then the frontal recess was opened. The endoscope was changed to 70 degree. Frontal sinus was located with the help of frontal curette and the ostium was enlarged with frontal mushroom and giraffe. The wider the mucocele is marsupialized the better is the result. After adequate marsupialization the sinus cavity was washed with Betadine. No stenting was used required. Once the frontal and or ethmoid mucocele has been marsupialized, the expanded "shell" of bone was pushed manually in order to correct any bony swelling that

may cause a cosmetic defect. Nose was packed with BIPP pack. Antibiotics was continued for 10 days. Patient went home on 3rd POD. Patient was evaluated in ENT OPD after 1 week to check the patency of the sinuses. After that, they were asked to follow up after 1 month, 3 months, 1 year, 16 months to check the patency of the sinus opening.

15 patients of fronto ethmoidal mucocele diagnosed clinically and confirmed by CT Scan underwent endoscopic marsupialization. All 14 patients did well till 16 months of follow up. Only 1 patient who had extensive frontal sinus involvement with complete erosion of anterior table of frontal sinus had two times recurrence after endoscopic marsupialization, so that cases was stented after second operation.

The majority of the mucocele can be marsupialized endoscopically with minimal morbidity and with long term result that are as good as done by the conventional external approach. Mohammadi et al had performed endoscopic marsupialization of fronto ethmoidal mucocele in 18 patients and had no recurrence till 17 months of follow up. Khang. et al performed marsupialization of 41 mucoceles and had no recurrence till 41 months of follow up. The wider the mucocele is marsupialized the better is the result. Extensive mucocele like extensive destruction of frontal bone or laterally extended frontal sinus mucocele may require combined approach both by endoscopic and external approach and may need stenting.

So, endoscopic marsupialization is the treatment of choice for fronto ethmoidal mucocele, as it is simple procedure causing less morbidity, short hospital stay, without external scar and without stenting which is very unpleasant for the patient as the stent needs to be kept for 4 weeks.

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