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Treatment of antral pathology – Which surgical route

In the chair: M.E. Wigand (Erlangen)
Participants: C.T. Buiter (Groningen), M.V. Griffiths (Bristol), D. Perko (Lausanne)

Professor Wigand introduced the discussion with a description of the three classical routes to Highmore's cavity.

I Transoral - transcanine
II Transnasal - infraturbinal (inferior nasal meatus)
III Transnasal - supraturbinal (middle nasal meatus)

He also noted rarer approaches such as the transfronto-ethmoid, the transoral Denker's operation and other combinations.

Individual modifications to the classical techniques were mentioned, for instance, vertical instead of horizontal mucosal incisions, bone flap techniques in the canine fossa, infraturbinal mucosal flap and supraturbinal fenestration with/without excision of the maxillary ostium. A consensus opinion was expressed regarding the standard approaches as being the most commonly used. Less agreement was obtained concerning the indications.

In the second part of the discussion, X-rays of typical clinical presentations were shown for consideration and discussion by the four panelists. Each participant expressed his views on the management but unfortunately the time available was too short to specify detail and to give the opportunity for the audience to participate.

The case histories presented included:

1. The single cyst/polyp in the maxillary antrum in the absence of symptomatology. Exploratory surgery in such circumstances was considered inadvisable. However, if there was an associated postnasal discharge, unilateral pressure etc. and conservative treatment had failed, inferior meatal antrostomy for removal of

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the cyst was recommended by Buiter, Griffiths and Perko, while supraturbinal fenestration was preferred by Wigand.

2. Recurrent empyema of the maxillary sinus. The management of anatomical abnormalities or pathology in the nose or of dental origin was considered of major importance in the management of recurrent empyema of the sinus. Conventional plain radiographic examination of the sinuses was considered to be of limited value particularly where previous surgery had been performed and some of the participants would always use computerised axial tomography as part of their routine investigation.
Provided that exploratory surgery to the sinus is considered necessary Buiter considered fenestration of the inferior nasal meatus as being the management of choice. Perko agreed and advised long-term irrigation therapy. He also believes in recovery in the function of the maxillary ostium and ethmoid complex after fenestration.
Wigand recommends supraturbinal fenestration with exploration of the adjacent ethmoidal cells. "Ethmoidal infundibulotomy" (excision of the ostio-meatal complex), is frequently necessary in his opinion. Buiter again expressed the necessity of computerised axial tomography imaging in the planning of surgery.

3. Recurrence of empyema after infraturbinal fenestration. There was no consensus amongst the participants as to the management of this difficult problem. The role of the middle nasal meatus in disturbances of ventilation and drainage of the antrum was considered and Wigand considers that in addition to exploring the maxillary antrum a partial ethmoidectomy is the keystone to the final recovery of the antrum.

4. Recurrence of chronic maxillary sinusitis after Caldwell-Luc operations. Again the role of CT scanning was discussed and considered to be the only radiological investigation (apart from NMR imaging) in the investigation of recurrent sinus disease.
If surgery is indicated endoscopic-endonasal reopening of the residual cavity may be possible. However, if a thicker wall of scar tissue hides a remaining cavity a transoral revision is favoured in central Europe and in England where the incidence of recurrences after Caldwell-Luc operations is high. In Switzerland this indication is extremely rare. There was general agreement that the transoral route was the most suitable for revision operations.

5. Chronic polypous pansinusitis (bilateral polyposis).
The debate was aimed at discussing polyps within the maxillary cavity but there was no time to discuss this indication in detail. During the remainder of the time

the management of unilateral polyposis and inverted papilloma were discussed. Buiter and Wigand thought it possible to completely remove the lesion together with the suspected mucosa around the lesion by an endonasal approach, with regular postsurgical endoscopic follow-up. Griffiths advocated a radical exenteration of the involved nasal and paranasal areas using a special transoral approach, combined with a transfixation dissection of the columellar and the tip of the nose to facilitate exposure.
He emphasised the good cosmetic result and a recurrence rate of zero in his series.

In conclusion there was general agreement on the pathophysiological principles which have to be respected in the treatment of antral pathology, but this short and lively discussion of case reports revealed that we are still far from the unanimous selection of an optimal approach in the management of the individual case.

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