RESEARCH LETTER

Endonasal Microrhinoscopic Analysis of DCR Failure

Narender K. Khullar, Ashok K. Sharma*

The initial application of operating microscope to nasal surgery was limited to the creations of antrostomies in children and adults (1). Its application was later on extended to more extensive nasal surgery like endonasal ethmoidectomy and transethmoid sphenoidectomy. We applied the microrhinoscopic approach to find out regional pathology and endonasally rectified the failure of external DCR in District Hospital due to non availability of Nasal Endoscope. Ten cases of failed DCR were evaluated endonasally, microrhinoscopically. (Table-1)

Surgical Technique : After history taking and investigations all the patients were operated under local anaesthesia. (Table-2) Patients were premedicated with injection promethazine and pethidine. Nasal cavity was anaesthetized with 4% xyllocaine with adrenaline in 1:1 lac concentration. The patients were made to lie supine with head raised 30^0 and tilted towards the surgeon. Under microscopic vision the lateral wall is injected with 2% xyllocaine with adrenaline 1:1 lac concentration.

To achieve good results meticulous post operative care and follow up were performed by gentle suction and alkaline nasal douche thrice per day followed by steroid nasal spray. Patients were followed up to six months.

Table 1 Various Causes of Failure

Cause	No.
Redundant flaps of Lacrimal sac	6
Ethmoidal nasal polyp	2
Irregular bony edges & small osteotomy	1
Granuloma formation	1

Table2 Treatment of Various Pathologies

Treatment	No.
Excision of redundant flaps of lacrimal sac	6
Polypectomy & widening of lacrimal sac opening	2
Chiselling bone to widen Osteotomy	1
Excision of granuloma	1

External DCR remains the preferred procedure of most ophthalmic lacrimal surgeons with success rate usually above 90%.Surgery can be performed on most adults with local anaesthetic infiltration combined with local anaesthetic and vasoconstrictor nasal packing (2). However various causes of failure may be fibrosis and occlusion of the rhinostomy site, common canalicular obstruction or small size of bony ostium.Success is also influenced by surgical approach, preoperative active dacrocysititis, trauma. postoperative soft tissue infection,granulations and nasal pathologies etc.

Advances made in the operative instruments coupled with better visualization and understanding of nasal pathology has led to the concept of microrhinoscopic sinus surgery (MRSS) (3).

Transnasal DCR has attracted much interest but in most surgeons experience results have not equaled an external approach. Endonasal approach also allows the surgeon to deal with nasal adhesions, granulation tissue and hypertrophic scar at the same time (4).

Whatever the surgeon preferences with respect to the indication for surgery in any particular patient, both external and endonasal approaches should be in the armamentarium of the lacrimal system surgeon (2).

Various advantages seen with Microrhinoscopic Endonasal Revision DCR(5).

1. There is excellent illumination and magnification
2. Binocular vision
3. Using self retaining speculum one can work bimanually.
4. This approach allows the surgeon to deal with nasal adhesions, granulomatous tissue and hypertrophic turbinates at the same time.

Although microrhinoscopic Endonasal revision DCR approach was applied in ten cases only but we feel that this technique allows for reduced failure and evaluation of local pathology accurately.

References

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From the P.G. Deptts. of *Ophthalmology, Govt. Medical College, & Directorate Health Services Jammu-J&K-India
Correspondence to : Dr. Narender K Khullar, House no. 201-A Gandhinagar, JAMMU-180004 J&K (India).