

PROSPECTIVE STUDY OF CONCORDANCE BETWEEN ANTERIOR RHINOSCOPY AND NASAL ENDOSCOPY IN DIAGNOSING NASAL POLYPOSIS

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ABSTRACT

Objective: Diagnostic capabilities of nasal endoscopy and routine rhinoscopy are compared with respect to nasal poliposis.

Methods: Anterior rhinoscopy and nasal endoscopy were performed after initial clinical and X-ray diagnosis of rhinosinusitis and nasal obstruction in 47 cases above 10 years age.

Result: Rhinoscopy could detect polyp in 13 (27.7%) cases. Nasal endoscopy detected 19 (40.4%) cases of polyp. One rhinoscopic diagnosis of the polyp was negated consequent to nasal endoscopy as mere mucoid collection.

Conclusion: Nasal endoscopy is very effective and superior application than rhinoscopy both in gaining access and proximate visualization of nasal and sinus pathologies. It also scores over CT scan by permitting gross examination of lesions and their possible nature. The technique is easy and be routinely adopted specially in cases where sinus symptoms are not well explained.

Keywords: Nasal endoscopy, Rhinoscopy, Nasal polyp, Rhino-sinusitis.

INTRODUCTION

Development of rod optic endoscope ushered new leap in diagnosis and management in rhinology [1,2]. Endoscopy enables examination of nasal and sinus cavities far better and in detail than the traditional anterior rhinoscopy. Endoscopy is particularly valuable in evaluating inflammatory state. An experience in relative merits of nasal endoscopy use versus anterior rhinoscopy toward quick and correct diagnosis of sinonasal poliposis is presented.

METHODS

The study was done in 47 cases with clinical evidence of sinonasal disease in age group above 10 years at Shishumangal Hospital, Kolkata, during September 2012 to August 2013 period. The subjects were evaluated both with anterior rhinoscopy aided by head mirror and the nasal endoscopy. The patients suffering maxillofacial trauma in past, or sinus surgery was excluded to avoid complexities of altered anatomy. A detailed history of the nasal complaint, general and ENT examination including focused search for anatomical and mucosal abnormality with stated equipment was performed. Thereafter, X-ray paranasal sinuses (Waters view) were obtained.

OBSERVATION AND RESULT

Of the 47 cases examined, anterior rhinoscopy detected 13 cases with nasal polyposis. On endoscopy, nasal polyps were detected in 19 cases of examined 47. One bilateral, 2 left, and 3 right polyp cases were missed in rhinoscopy. Nasal endoscopy even ruled out one rhinoscopic diagnosis, which was mere collection of mucus.

Cross tabulation of diagnostic accomplishments of polyp in with two techniques

A statistical analysis was performed with SPSS version 20. The level of concordance between rhinoscopy and endoscopy diagnostic success was evaluated by calculating kappa coefficient (k=0 is no concordance; 0.01-0.2 is slight; 0.21-0.4 is noticeable; 0.41-0.6 is fair; 0.61-0.8 is moderate and 0.81-1 is perfect concordance levels).

Anterior rhinoscopy	Nasal endoscopy			Total
	???	Bilateral	Left Right	
Count	27	2	2 3	34
Percentage within anterior rhinoscopy	79.4	5.9	5.9 8.8	100
Percentage within nasal endoscopy	96.4	28.6	50 37.5	
Bilateral count	0	5	0 0	5
Percentage within anterior rhinoscopy	0	100	0 0	100
Percentage within nasal endoscopy	0	71.4	0 0	
Left count	1	0	2 0	3
Percentage within anterior rhinoscopy	33.3	0	66.7 0	100
Percentage within nasal endoscopy	3.6	0	50 0	
Right count	0	0	0 5	5
Percentage within anterior rhinoscopy	0	0	0 100	100
Percentage within nasal endoscopy	0	0	0 62.5	
Total count	28	7	4 8	47
Percentage within anterior rhinoscopy	59.6	14.9	8.5 17	100
Percentage within nasal endoscopy	100	100	100 100	100

k=0.6

DISCUSSION

Anterior and posterior rhinoscopy procedures do not provide adequate knowledge as these visualize structures lying directly in the line of vision. Posterior rhinoscopy may not be feasible in all cases. Therefore, timely diagnosis of lesions is not possible. Ample examination of nose and post nasal space with endoscope was advocated by findings of another study [3]. It is pertinent very much, when anterior and

posterior rhinoscopy fail to capture obstructive nasal pathology. In this study, anterior rhinoscopy detected nasal polyp in 27.7% of cases of rhinosinusitis. In some patients nasal endoscopy successfully detected polyps in 40.4%. The level of concordance of the two procedures in the diagnosis of nasal polyp is substantiated ($k=0.6$). It has been recommended that, for patients presenting with unexplained sinusitis symptoms, rigid nasal endoscopic examination may routinely be considered to avoid missing pathology in speculum and nasopharynx examination [4]. Other studies found endoscopic exam to reveal nasal polyps even in some cases with negative computed tomography (CT) scan [5].

Nasal endoscopy may also identify early mucosal polypoidal changes which CT scan will not. Rhinoscopy may not access where endoscopy may access easily, like in ostiomeatal complex area. Images through

nasal endoscopy can be captured and recorded for documentation. Radiological investigations may be obviated.

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