

Discrepancies between histopathological and clinical diagnosis of unilateral nasal polyp

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Abstract

Aim: The aim of the study was to establish clinical and histopathological diagnostic correlation of unilateral nasal polyp.

Methods: Total 69 patients were included in the study those who treated surgically for unilateral nasal polyp and histopathological diagnosis confirmed at Dhaka medical college hospital from 2009 to 2011.

Results: Clinically diagnosed 69 patients of unilateral nasal polyp among which 59 cases were inflammatory polyp histopathologically, 10 cases (14.49%) differed histopathologically from the clinical diagnosis. Among 10 cases, 04 (four) were benign neoplasm, 04 (four) were malignant neoplasm and two were rhinosporidiosis.

Conclusion: The results of this study suggested that it is necessary to subject all nasal polyps for histopathological examination.

Keywords: Nasal polyp.

Introduction:

Polyp is derived from Greek, meaning many footed (poly-many; pou- footed) but a polyp has only one foot (stalk). A polyp presents in the nasal cavity with a grape like appearance, having a body and a stalk. The polyps protrude in to the nasal cavity from the middle and superior meatus resulting in nasal blockage and abolishing airflow to the olfactory region¹. The name "Nasal polyp" is applied somewhat loosely to a projection of edematous mucous membrane. Any condition of hyperaemia or inflammation within the nasal cavity may give rise to polypus formation. Though, a large proportion of nasal polyps are generally allergic in origin, these may accompany chronic rhinitis, sinus suppuration, benign or malignant nasal or paranasal sinus disease². Hence, the term nasal polyp is regarded as a "sign" and not as a diagnosis³. Nasal polyps are typically multiple and bilateral. The occurrence of nasal polyps bilaterally is usually met with allergic polyps and clinical diagnosis is certain. But in cases of unilateral nasal polyps the clinical diagnosis cannot be made clearly in all cases and the confirmation by pathologist is must to decide on the treatment options. In some of the cases the clinical diagnosis entirely deviated from the pathological diagnosis.

Nasal bleeding, pain & unilateral polyps should alert the physicians to other conditions, such as malignant tumours, inverted papilloma and in a child, meningocele, all of which may masquerade as simple polyps for that reason, microscopy is always necessary when polyps are removed for the first time and when polyps are unilateral. Unilateral nasal polyps should always be regarded with suspicion and histology is needed in order to exclude malignancy⁴. There is no general consensus about the importance of routine nasal polyp histology and some even think it as unnecessary when malignancy is not suspected on clinical grounds⁵. A prospective study was carried out to find out this difference between the clinical diagnosis and the histopathological diagnosis, by analyzing the histopathology reports of clinically diagnosed unilateral nasal polyps from 2009 to 2011 at ENT department, Dhaka Medical College Hospital.

Patients and Methods:

Total 69 patients of both sexes of different age groups (youngest 2 years and oldest 70 years) were clinically diagnosed unilateral nasal polyp from 2009 to 2011 and included in this study. All the patients had surgery for unilateral nasal polyps and specimen sent for histopathological examination. The study was done at ENT department, Dhaka medical college hospital from 2009 to 2011. The data were collected purposively including age, sex, clinical diagnosis, and histopathological reports. The classification of tumors of nose and paranasal sinuses by WHO is followed in this study. The data are analysed by simple statistical methods.

Results:

In a review of the histopathological diagnosis of 69 patients who had nasal polypectomy operation of which 61 (88.41%) were non-neoplastic and 08 (11.59%) were of neoplastic origin. The distribution of histopathological diagnosis is shown in Table-I.

Table-I: Unilateral nasal polyps: histopathological results (n=69).

S. No.	Histopathological Diagnosis	No. of cases	Percent
1	Allergic or inflammatory polyps	59	85.5%
2	Rhinosporidiosis	2	2.9%
3	Neoplastic	8	11.6%
	Total	69	100%

Among the neoplastic cases 08(11.59%) of which benign 04 (5.80%) and the rest of the 04(5.80%) were malignant (Table II).

Table-II: Nasal polyp histopathology results neoplastic cases. (n=08)

Histopathological Diagnosis	No. of cases	Percentage of Total (n=69)
Benign:		
<i>Epithelial :</i>		
Transitional Cell papilloma (Inverted Papilloma)	2	
Adenoma	1	
<i>Mesenchymal :</i> Fibroma	1	
Subtotal:	4	5.8%
Malignant:		
Squamous cell carcinoma	1	
Adenoid cystic carcinoma	1	
Rhabdomyosarcoma	2	
Sub-total	4	5.8%
Total	8	11.6%

Our clinical diagnosis correlated well with the pathological diagnosis except in 10 cases (14.49%) in which clinical diagnosis differed from pathological diagnosis i.e., there was no clinical suspicion. (Table III).

Table-III: Clinical Diagnosis Vs Histopathological Diagnosis in 10 cases.

S.No.	Clinical Diagnosis(unilateral)	Age	Sex	Histopathological Diagnosis
1	Nasal polyp (Lt)	55	F	Squamous cell carcinoma
2	Nasal polyp (Rt)	50	M	Adenoid cystic carcinoma
3	Antrochonal polyp (Rt)	6	M	Rhabdomyosarcoma
4	Antrochonal polyp (Rt)	4	M	Rhabdomyosarcoma
5	Nasal polyp (Rt)	10	M	Adenoma
6	Nasal polyp (Rt)	20	F	Inverted papilloma
7	Nasal polyp (Lt)	50	M	Inverted papilloma
8	Nasal polyp (Rt)	47	F	Fibroma
9	Nasal polyp (Rt)	19	M	Rhinosporidiosis
10	Nasal polyp (Lt)	21	F	Rhinosporidiosis

Discussion:

Total sixty nine patients were reviewed who unilateral nasal polypectomy operations and specimen had examined histopathologically between 2009 to 2011. As only unilateral nasal polyps were sent for histopathological confirmation, the clinical diagnosis and histopathological reports were compared to determine the accuracy of clinician's ability to clinically identify nasal polyps of sinister pathology.

In this series there were 59(85.50%) histopathology reports of nasal polyps with inflammatory/allergic in origin, 02 (2.90%) were rhinosporidiosis and 08(11.59%) were neoplastic. In 59(85.50%) cases the clinical diagnosis correlated well with the pathological diagnosis. However, in

10(14.49%) cases the clinical diagnosis differed from the pathological diagnosis as presented in Table-III. In two cases of clinically suspected unilateral nasal polyp, the histopathological diagnosis was made out inverted papilloma . In one case, adenoid cystic carcinoma was detected histopathologically in a clinically suspected case of nasal polyp. In two cases Of antrochoanal polyp the pathological diagnosis was made out rhabdomyosarcoma. One case of unilateral polyp was diagnosed as moderately differentiated squamous cell carcinoma by pathologist. In one case, unilateral nasal polyp of a10 year old boy was diagnosed adenoma histopathologically.

There is no general consensus about the need for routine histopathology of nasal polyps among ENT surgeons.

According to Kale SU et al⁶, there was 99.7% correlation between clinical diagnosis and histological diagnosis in a prospective study done and he is against the practice of sending nasal polyps for routine histological examination. Alum Jones et al⁵ pointed out that only 38% of ENT surgeons take the help of pathologist in confirming their diagnosis in cases of nasal polyposis. The study by Diamantopoulos-II et al³ in 2201 cases justified routine histological examination of nasal polyps.

However, the use of clinical criteria as a method for selecting nasal polyps for histopathology proved inadequate as several cases with sinister pathology would have missed /escaped diagnosis. This finding was studied in respect of inverted papilloma, which revealed that it is difficult to distinguish inflammatory nasal polyps from inverted papilloma⁷ and further noted the importance of having a differential diagnosis between sinonasal chronic infection and sinonasal tumors⁸. This finding is in agreement with recommendations of other studies that have been reported on various tumors of nasal cavity⁹, vascular tumors¹⁰, Rhinosporidiosis¹¹.

Routine histopathology is recommended, as definite diagnosis cannot be made based on clinical criteria alone. However, the studies on nasal polyps are suggesting certain definite clinical criteria to identify nasal polyps of sinister pathology. These include an appearance that is friable, haemorrhagic indurated, unilateral and a history of pain, radiological evidence of bony erosion or previous abnormal histopathology.

Conclusion:

In this series, the occurrence of malignancy, benign neoplasm or other significant pathology where there was no clinical suspicion in 14.49% of cases. Based on our observations made in the present study we strongly believe that a clinical diagnosis on the basis of history and clinical examination is inadequate and routine histopathological examination is necessary in all nasal polyps.

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