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The level of incidence of rhinosporidiosis in Nasal Mass in ear, nose and throat

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***Abstract*---**According to Swindle (1935) in the mucous membrane of the nose the arrangement of the blood vessels consists of a superficial venous plexus and a deeper arteriolar. System, arranged parallel to the long axis of the nose. The relationship of taking bath in infected pond and agriculture work is explained by the above observation. There is no specific occupational incidence in other of nasal mass in the present series. Out of 8 cases (6.15%) of malignant tumours, sq. cell carcinoma is the most common (66%), in which three cases (37.5%) were sq. cell carcinoma of maxillary sinus, 2 cases of sq. cell carcinoma of nose & 1 case of sq. cell carcinoma of ethmoid sinus. Nasal masses are more common on 2nd decade (33.33%) followed by 3rd decade (26%). Malignancy of nose /PNS are found in 4-6th decade of life. Nasal masses are more common in males (71%)

Keywords*---Tumours, Carcinoma, Arteriolar. System, Nose, Nasal Mass*

Introduction

According to Swindle (1935) in the mucous membrane of the nose the arrangement of the blood vessels consists of a superficial venousplexus and a deeper arteriolar. System, [1] arranged parallel to the long axis of the nose.

The venous plexus is especially marked over the inferior turbinate and the lower part of the septum.[2] It has been shown by Harper (1947 that the main arteries occupy an interosseous position and branches pass from these arteries to form a fine subepithelial plexus.[3] Arterio-venous anastomoses also described in the nasal mucosa, these may play an important part in the control of the erectile tissue[4,5]. The venous plexus drains to the neighboring large veins, the spheno-palatine vein and the anterior facial vein, and from the ethmoidal to the ophthalmic veins, and there are communications with the cerebral veins through the cribriform plate.[6] A communicating vein may pass through the foramen caecum, which lies between the crista gall and the frontal crest.[7] The nerve supply of the mucous membrane is derived from the fifth cranial nerve i.e. trigeminal nerve with the exception of nasocially nerve, the nerve of the pterygoid canal, the long sphenopalatine nerve,[8] the greater palatine nerve and nasal branches from these sphenopalatine ganglia.[9]

The lymphatic drainage from the anterior part of the nasal cavity is to the submandibular glands through the lymph vessels of the skin of the o those at the back of the pharynx.[10]

Method

Material and Methods

The present work comprises of clinical and histopathological assessment of mass in nose, amongst patients attending the Ear, Nose, and Throat out-door department of the V.S.S.Medical College Hospital, Burla during the period December 2009 to August 2011. Patients with a definite mass in nose are admitted to the E.N.T. ward for a thorough clinical study which includes detailed history, routine and special investigations and histopathological assessment of the lesion.

Observation and Results

Fig no 3. 1 :- Age Incidence

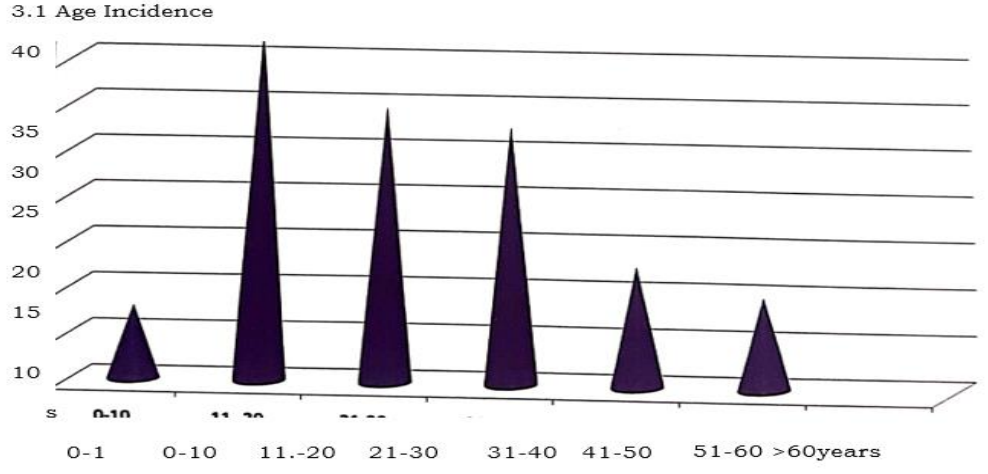

Table –3 . 1 Age Incidence

Si.No.	Type of mass	0-10	11-20	21-30	31-40	41-50	51-60	>60 year
	Non-neoplasrtic							
1	Rhinosporidiosis	3 (6.66%)	15(33.33%)	10(22.22%)	8(17.77%)	8(17.77%)	1(2.22%)	-
2	Antrochoanal Polyp	12(10.%)	9 (45%)	6(30%)	3(15%)	-	-	-
3	Ethmoidal Polyp	-	4(22.22%)	5(27.77%)	6(33.33%)	2(11.11%)	1(0.35%)	-
4	Cyst	1(20%)	1(20%)	2(40%)	1(20%)	-	-	-
5	Fungal granuloma	-	-	2(50%)	2(50%)	-	-	-
	Bening Tumours							
6	Hemangioma	2(20%)	3(30%)	2(20%)	2(20%)	-	-	-
7	Squmoous cell papiloma	-	2(33%)	1(16%)	3(50%)	-	-	-
8	Fibroma	-	-	2(66%)	1(33%)	-	-	-
9	Angiofibroma	-	3 (100%)					
10	Inverted Papilloma					1 (33%)	2(66%)	
11	Neurofibroma		1(100%)					
12	Ossifying fibroma of maxilla				1(100%)			
13	Pleomorphic				1(100%)			
	Malignanant Tumours							

14	Sq. Cell CA maxilla					1(33%)	2(66%)	
15	Sq. Cell CA Nose						2(100%)	
16	Sq. Cell CA Ethmoid					1(100%)		
17	Adenoid cystic CA Maxilla						1(100%)	
18	Adenocarcinoma						1(100%)	

From Table I it is observed that the nasal masses are more common in 2 nd decade of life, 4th decade being the next in order.

Rhinosporidiosis is observed mostly in 2nd Decade (33.33%),next common being the 3rd decade (22.22%) . this finding is in accordance with the finding of Allen and Dave (1936) Iqbal and dani (1993) How ever Satyanarayan(1960)Sharma et al (1962)Kutty et al (1963) and purandare and Deoras (1953) found the largest number of case in the age group of 21-30 years , followed by 11-20 years Antro-chonal polyp is found to be more common in 2nd decade (45%) of life. Dale (982) quote that this disease is more common in childhood and adolescence. Ethmoidal polyp is a disease of adult and the incidence is maximum between 30-40year of age (Lee 1984) which concedes of malignancy of nose are above 40 years of age with peak incidence at 51-60 years (65%) this finding coincidence of malignancy in nose after the 4th decade life. Bahadur et al (1984) found 60% of case above 40 years of age. Sharma et al (1991) in their series found the peak incidence 5th and 6th decade of life.

3 Cases of nasopharyngeal angio fibroma are seen between 11-20 years of age which coincides with the findings of martin et al (1984) Harrision (1976) and kohali and taneja(1967

Table 3.2
it is observed that the nasal masses

S.No.	**Type of mass**	**Male**		**Female**	
		No. of Case	**%**	**No. of Case**	**%**
	Non Neoplastic				
1	Rhinosporidiosis	32	71	13	9
2	Antrochoanal polyp	12	54.5	10	45.5
3	Ethmoidal polyp	10	55.5	8	45.5

4	Cyst	3	60	2	40
5	Fungal Garanuloma	3	75	1	25
	bening Tumours				
6	Hemangioma	4	40	6	60
7	Squomous cell Papilloma	3	50	3	50
8	Fibroma	2	66	1	33
9	Angiofibroma	3	100		
10	Inverted PApilloma	3	100		
11	Neurpfibroma	1	100		
12	Ossifying fibroma of mxilla			1	100
13	Pleomorphic adenoma	1	100		
	malignant Tumours				
14	Sq. Cell CA maxilla	2	66.66	1	33.33
15	Sq. Cell CA Nose	2	100	-	-
16	Sq. Cell CA Ethmoid	-	-	1	100
17	Adenoid Cystic CA maxilla	1	100		
18	Adenoacarcinoma	1	100		

Table No. 1 Shows the incidence of nasal, mass to be higher in males (63.84%) Rhinosporidiosis too predominates in males (71%).

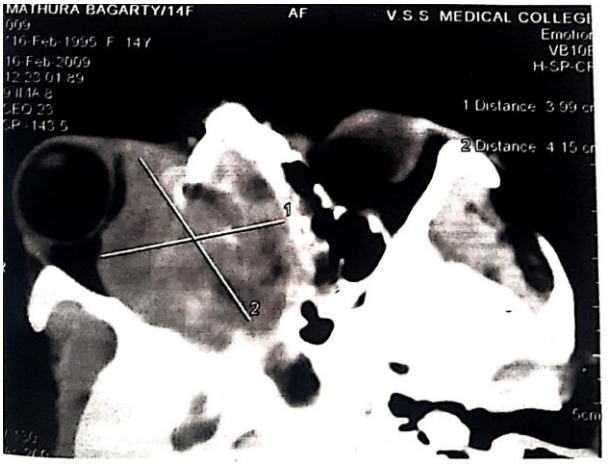

Fig 3.2 Ethmoid carcinoma causin proptosls

Higher incidence in male havr been noted by Purandaare and Deoras (1953) Satyanarayana (1960). Das (1974) and Iqbal and dani (1993) and their findings are consistent with the present series.

Table 3.3
Incidence By Sex

Sex	Present series	Allen & Dave (1936)	Purandaro Deoras (1953)	Satyanarayana (1960)	Kutty et all (1963)	Das (1974)	Iqbal & Danl (1993)
Male	32	45	99	205	20	27	94
Female	13	15	01	50	02	04	16
Total	45	60	100	255	31	31	110

Antro-choanal polyp and Ethmoidal polyp are more common in male, 54.55,% and 55.5% respectively. Dale (1982) and Drake Lee (1984) found the same incidence in nasal polyp. Of the 8 cases of malignancy, 6 are male and 2 are in female (M:F ratio 3:1). Male predominance had been reported by Bahadur et al (1984) (M:F ratio 1.5:1) and Sharma et al (1986) (M:F ratio 1.28:1). All the 3 cases of nasopharyngeal fibroma are males and this coincide with the findings of Figi (1940) and das (1970).

Table -3.4
Occupation

Si. No.	**Type of mass**	**Cultivation**	**Student**	**Service**	**Business**	**Miscellaneous**
	Non- neoplastic					
1	RhinoSporidiosis	30 (66.66%)	10(22.22 %)	1(2.2%)	1(2.2%)	3 (6.66%)
2	Antrochoanal Polyp	3 (13.63%)	14(63.63 %)	2(9.09%)	1(4.54 %)	2(9.09%)
3	Ethmoidal Polyp	8(44.44%)	3(16.66%)	4(22.22 %)	1(5.55 %)	2(11.11%)
4	Cyst	2(40%)	2(40%)			
5	Fungal granuloma	2(50%)	1(25%)	1(25%)		
	Bening Tumour					
6	Hemangioma	3(30%)	5(50%)	2(20%)		
7	Squomous cell Papiloma	2(33.3%)		2(33.3%)		2(33%)
8	Fibroma			1(33%)	1(33%)	1(33%)
9	Angiofibroma		3(100%)			
10	Inverted Papiloma	2(66%)		1(33%)		
11	Neurofibroma	1(100%)				
12	Ossifying fibroma of maxilla	1(100%)				

13	Pleomorphic adenoma	1(100%)				
	Maliganat tumour					
14	Sq call CA Maxilla	2(66%)				
15	Sq call CA Nose	1(50%)				
16	Sq call CA Ethmoid	1(100%)				
17	Adenoid cystic CA maxilla					1(100%)
18	Adenocarcinoma maxilla sinus					1(100%)

From the table 3 l it is found that the incidence of rhinosporidiosis is foud more commonly among the cultivators (66.66%) similar observation were reported by allen and Dev(1936),Karunarantne (1964), Kameswaran (1966),Das (1974).

Conclusion

The relationship of taking bath in infected pond and agriculture work is explained by the above observation. There is no specific occupational incidence in other of nasal mass in the present series. Out of 8 cases (6.15%) of malignant tumours, sq. cell carcinoma is the most common (66%), in which three cases (37.5%) were sq. cell carcinoma of maxillary sinus, 2 cases of sq. cell carcinoma of nose & 1 case of sq. cell carcinoma of ethmoid sinus. Nasal masses are more common on 2nd decade (33.33%) followed by 3rd decade (26%). Malignancy of nose /PNS are found in 4-6th decade of life. Nasal masses are more common in males (71%)

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