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A STUDY ON VARIED PRESENTIONS OF RHINOSPORIDIOSIS IN A TERTIRY CARE HOSPITAL

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ABSTRACT Rhinosporidiosis is quite common a disease in western Orissa with varied presentations including extra nasal ones. Because of the recurrent nature of extra nasal cases, it puts a lot of financial burden and much morbidity on the patients. A study was undertaken in Department of E.N.T. & Head and neck Surgery- V.S.S. Medical College, Burla, between September 2010 to October 2012 to gain a knowledge base on various nasal and extra nasal manifestation of this disease to improve their mode of treatment

KEYWORDS : Rhinosporiodiosis. Nasal, Extra Nasal

INTRODUCTION

In spite of so many scientific advancements to this day, many a problems in medical science is yet to get a permanent solution. One such problem is infection with Rhinosporidium Seeberi[1] leading to development of the disease rhinosporidiosis. Though the causative agent is fairly well known as regards its morphology and lifecycle, the different presentations and curative aspect still possess a challenge to medical fraternity.

It is a chronic granulomatous disease affecting humans and animals presenting as a papillomatous and polypoidal granuloma that is soft, friable and bleeds on manipulation. Although it affects predominantly nose[2], extra nasal sites like nasopharynx, lacrimal sac, conjunctiva, lids, uvula, soft palate, epiglottis, larynx, trachea, bronchus, scalp, limbs, penis and vulva are other sites to be affected.

In India, its incidence is endemic in states like Orissa, Chhattisgarh, Madhya Pradesh, Maharashtra, Bihar and West Bengal. Quite a large number of cases of rhinosporidiosis come to hospitals of western Orissa. Because of rural dwelling and habit of pond bating as well as delay in seeking treatment, many patients present with wide spread disseminated form.

This study was undertaken with a view to get a clear picture of its topographical incidence as well as varied presentation in a tertiary care hospital of western Orissa.

MATERIAL AND METHODS

The patients coming with complaints of nasal mass with epistaxis or dysphagia with mass in oropharynx and mass in other sites of body suspected of rhinosporidiosis were studied, treated and followed up in the Department of E.N.T. & Head and neck Surgery- V.S.S. Medical College, Burla, between September 2010 and October 2012. Those patients referred with lesions from department of Dermatology and Ophthalmology was also included in the study. Detailed history as regards chief complaint, duration of symptoms, age, sex, personal and family history were recorded. A thorough general examination followed by otolaryngological examination was done. Routine haematological and in deserving cases, radiological investigation was done. Subsequently, they were taken up for surgery and post-operative histopathological study of all excised specimens were done. As part of the study, 242 cases of rhinosporidiosis with varied presentation were considered.

OBSERVATION

The incidence of rhinosporidiosis in the present series accounts for .76% of total OPD cases in the Dept. of E.N.T. Out of 242 cases of rhinosporidiosis, 81 had extra nasal presentation. The nasal to extra nasal ratio is 3:1.

Table 1: Incidence of Rhinosporidiosis

Period	Total no. of cases attending ENT OPD	Total no. of cases having rhinosporidiosis	% of patients with rhinosporidiosis	Pts. with extra nasal rhinosporidiosis	Nasal to extra nasal ratio
Sept 2010 to Oct 2012	31,470	242	0.76 %	81	3: 1

The study revealed that a majority of patients (91) to be in the age group of 21-30 years followed by 81 cases in the age group of 11-20.

Table 2: AGE DISTRIBUTION

AGE DISTRIBUTION		
AGE (IN YEARS)	**PATIENTS OPERATED FOR CSOM**	**PERCENTAGE**
0-10	10	4.13
11-20	81	33.4
21-30	91	37.6
31-40	23	9.5
41-50	30	12.39
>50	7	2.89

In the present study males were observed to predominate the females in incidence.

Table 2: SEX INCIDENCE

SEX DISTRIBUTION		
SEX	**NO OF PATIENTS**	**PERCENTAGE**
MALE	168	69.42
FEMALE	74	30.57
TOTAL	242	100

As Western Orissa is a predominantly rural based state, most of the patients (76%) were from rural areas.

Table 3: Area of incidence

RESIDENCE	NO OF PATIENTS	PERCENTAGE
RURAL	185	76.44
URBAN	21	8.67
SEMI-URBAN	36	14.87

The incidence of the disease is more among agricultural workers (57%) followed by that in students (33%).

Table 4: Occupation

Occupation	No. of patients	percentage
Agriculture	140	57.85
Business	2	0.8
Student	80	33.05
Industrial worker	11	4.5
Housewife	9	3.71

Study of bathing habit of the patients reveal that the condition is more common among those taking bath in stagnant water like ponds,canal,tank etc. and it is less in people bathing in tap water.

Table 5: Bathing habit

Bathing habit	No. of patients	Percentage
Canal/pond/river	192	79.33
Well/bore well	26	10.74
Tap water	24	9.91

As far as socio-economic status is concerned, low socio-economic group of people of agricultural background suffer maximum (82%) followed by medium socio-economic group (12%).

Table 6: Socio-economic status

Socio-economic status	No. of patients	Percentage
High	12	4.95
Medium	30	12.3
Low	200	82.6

Maximum no. of cases were having 'O' positive blood group (42%) and least were of AB positive group.

Table 7: Blood group

Blood group	No. of patients	Percentage
O+	103	42
A+	58	24
B+	60	25
AB+	21	9

In this study, out of 242 cases 151 (62%) were nasal and 81 cases (33%) were extra nasal ones. Amongst the latter group, nasopharyngeal rhinosporidiosis accounts for 48(59%), ocular ones for 30(37%), cutaneous ones for 2(2%) cases.

Amongst the nasal cases, most common site of attachment was lateral wall followed by floor of nasal cavity. In the nasopharyngeal ones lateral wall of wall was commonest finding.

Table 8: Sites

Sites	No. of patients	Percentage
Nasal	151	62.39
Extra nasal	81	33.47

Table 9: extra nasal sites

Extra nasal	No. of patients	Percentage
Nasopharyngeal	48	59.25
Ocular	30	37.03
Skin	2	2.46
Laryngeal	1	1.23

Table 10: Sites of attachment in nasal cavity

Sites	No. of patients	Percentage
Lateral wall	63	41.72
Septum	23	15.23
Floor	25	16.55
Roof	7	4.6
Vestibule	18	11.92
Multiple sites	15	9.93

Amongst the ocular cases, conjunctiva was the commonest site of attachment.

Table 11: Ocular sites of attachment

Sites	No. of patients	Percentage
Conjunctiva	13	43.3
Lacrimal sac	7	23.3
Lid margin	7	23.3
Nasolacrimal duct	3	10

97% patients presented with epistaxis and 91% with nasal obstruction. Rhinorrhoea was the symptom in 95% cases and anosmia in 11% cases.

Table 12: Symptoms

Symptoms	No. of patients	Percentage
Nasal obstruction	222	91.73
Epistaxis	237	97.93
Rhinorrhoea	232	95.86
Anosmia	28	11.57
Sneezing	58	24

All cases underwent surgical excision with adequate base cauterisation. But, 43% had relapse at the same or adjacent site.

DISCUSSION

Patients of rhinosporidiosis – although symptomatic for many months or years- present at a variable time after onset leading to multiple sites of attachment and even extra nasal presentations.

During the period between September 2010 and October 2012, total 242 cases of rhinosporidiosis were seen in Department of E.N.T. & Head and neck Surgery- V.S.S. Medical College, Burla. B.C. Das ET al[3] had found 160 number of such cases in similar duration in 1999-2001 in the same institute. This might be due to stiff rise in population and increased health consciousness.

Maximum cases were aged in between 2nd to 3rd decade followed by in the age group of 11-20. Bandopadhya et al[4] (2015) found maximum age incidence between 11-20 years (17%) followed by 21-30 years (13%). Majumdar et al[5] (2014) found maximum of their cases in 3rd and 4th decade of life. Peak incidence noticed by most authors can be attributed to more pond bathing habits in adolescent.

Majority of the cases were males (69%) in this series. Similar was the finding of Bandopadhya et al[4] (2015) at the ratio of 2:1.

Rural based population predominated our series. Majumdar et al (2014)[5] had noted all their patients were from rural background. Orlandi (1926) and Arsecularatne (2002)[6] had also similar findings. The relation might be the bathing habit of rural populace in infected pond water. Because, about 80% patients in this study had pond bathing habit.8.7% urban populace also suffered from this malady and this can be accounted by the fact that some of them are migrants from rural areas with history of pond bathing.

In the study incidence is more common in agriculture workers (60%).Jain (1991)[7], Karunaratne (1939)[8], Das (1975)[3] had similar findings.

Low socio-economic status of patients suffer maximum (82%) of this condition.

'O' blood group constitute majority cases and 'A ', 'B' GROUPS had equal incidence and least in AB group. Arsecularatne (2000) had same finding in his study.

Most of cases in our series were nasal ones and amongst extra nasal sites, nasopharynx was commonest site. Arsecularatne (2002)[6] had about 70% of his cases in nasal cavity and 65% of extra nasal were in nasopharynx. Majumdar et al (2014)[5] had also found majority of their cases in nasal cavity.Makanavar[7] et al found 85% of their cases in nose and nasopharynx. Out of 30 ocular cases, 13(43%) had mass in palpebral conjunctiva and 7 in lacrimal sac.

Symptomatologicaly, 97% presented with epistaxis and 95% with rhinorrhoea and 91% with nasal obstruction. Das et al (1975[3]), Bandopadhya et al (2015)[4] and Venkatachalam et al (2007)[9] had similar

experience.

CONCLUSION

Nasal and extra nasal rhinosporidiosis is a common disease in Orissa. Disseminated ones are also not that uncommon in this part of the country. As it has got high morbidity and chances of multiple recurrences, a thorough excision is the mainstay of treatment. At the same time, more extensive study needs to be undertaken for proper management of this disease.

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