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PREVALENCE OF RHINOSPORIDIOSIS AT TERTIARY CARE HOSPITAL OF JHARKHAND, RIMS, RANCHI

Pathology

Dr. MD. Raihan* Post-Graduate Student, Depatment of Patholgy, RIMS, Ranchi *Corresponding Author
Dr. Suraj Sinha Post-Graduate Student, Department of Pathology, RIMS, Ranchi
Dr. Mushtaque Ahmad Ansari Associate Professor, Department of Pathology, RIMS, Ranchi
Dr. Anil Kumar Sinha Professor and Head of Department, Department of Pathology, RIMS, Ranchi.

ABSTRACT

Background: Rhinosporidiosis is a chronic granulomatous infective disorder, caused by Rhinosporidium seeberi, endemic in southern India, Sri Lanka and emigrants from this region. It is characterized by hyperplastic polypoid lesions of the nasal cavity and rarely other mucous membranes. Typically it occurs in a nasal polyp but may be found in other locations like nasopharynx, larynx and conjunctiva.
Material and Methods: A retrospective study of histopathologically diagnosed cases of Rhinosporidiosis for a period from January 2017 to December 2019. Results: Out of total 19 patients 16 (84.2%) were males and 3 (15.8%) were females. Most common age group involved was 11 to 20 years (56.3%) followed by 1 to 10 years (31.6%) and the lesion involved in most of the cases 7 (37%) belonged to a size range of 1.1-2 cm
Conclusion: Rhinosporidiosis mainly affects children and young adults of male gender growing usually to upto 2 cm with no preference for laterality.

KEYWORDS

granulomatous, rhinosporidiosis, histopathology, retrospective

INTRODUCTION

Rhinosporidiosis is a chronic granulomatous infective disorder. It is caused by Rhinosporidium seeberi, traditionally thought to be a fungus but actually an aquatic protistan parasite[1]. Endemic in southern India, Sri Lanka and emigrants from this region[2]. It is characterized by hyperplastic polypoid lesions of the nasal cavity and rarely other mucous membranes[3]. Typically it occurs in a nasal polyp but may be found in other locations like nasopharynx, larynx and conjunctiva etc. and rarely presents with disseminated skin disease[4].The diagnosis is readily made by the identification of numerous globular cysts measuring up to 200 nm in diameter. Each of these cysts represents a thick-walled sporangium containing numerous spores. The precise nature of this organism remains enigmatic. Molecular studies indicate that Rhinosporidium seeberi clusters with a novel group of fish parasites referred to as the DRIP clade (Dermocystidium, rosette agent, Ichthyophonus, and Psorospermium), near the animal–fungal divergence[3].

MATERIALS AND METHODS

It was a retrospective study, performed in the Department of Pathology, RIMS, Ranchi. Study Population included all cases of histopathologically diagnosed Rhinosporidiosis of nasal cavity presenting from January 2017 to December 2019. Reports having major typographical errors were excluded from the study. Study Procedure involves case reports having patient age, sex, size, site and laterality of lesion. Surgically excised mass was transferred to jar containing10% formaldehyde. Histopathologicalexamination of all the specimens was done by routine paraffin wax sections and was stained by Haematoxylin and Eosin (H&E). The epidemiological data in terms of age, sex, site, laterality and size of tumor were compared and analysed.

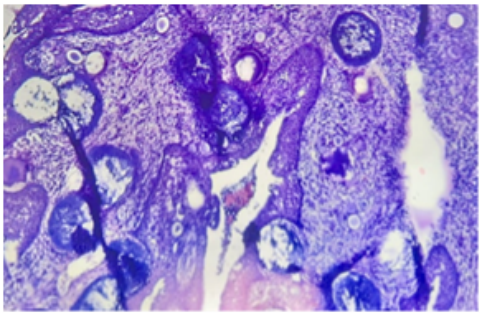

FIG. 1:Histopathological appearance of Rhinosporidiosis

RESULT AND DISCUSSION

In the present study 19 cases were included, out of which 16 (84.2%) are male and 3 (15.8%) are female. Male and Female ratio is 5.3:1 shows male predominance of Rhinosporidiosis. Chitravel et al[5]also reported male predominance of 4:1 to 9:1 in incidence. The fact that females have less chance of animal contact, less frequent pond baths may attribute to lesser female prevalence. Some authors thought that effect of estrogen in females provides protection from the disease[6].

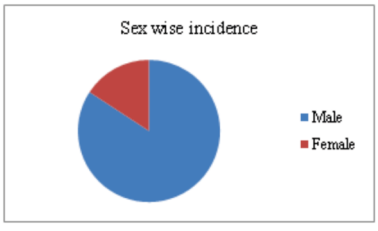

Fig.2: Sex Wise Incidence

Mean age of cases was 16.3 years. 63% of cases belong to age group 11 to 30 years. Youngest patient in our study was 5 years old whereas oldest patient was 45 years old. Male age group between 11-20 years were found to be more susceptible. Pal et al[7], also observed thatmost common age group affected were those aged between 11 and 20 years of age. 10 cases were right sided and rest 9 were left sided in terms of laterality.

Table – 1 Age-wise Incidence

Age group (years)	Number of Male	Number of Female
01-10	4	2
11-20	8	1
21-30	3	0
31-40	0	0
41-50	1	0
>50	0	0
Total	16	3

Single largest dimension of the lesion varied from 0.5-7 cm in size but most cases 7 (37%) belonged to a range of 1.1-2 cm with mean size 2.88 cm.

Table – 2 Size-wise Incidence

Size (cm)	Number of cases
<1	3
1.1-2	7

2.1-3	3
3.1-4	2
4.1-5	1
5.1-6	1
6.1-7	2

CONCLUSION:

Rhinosporidiosis mainly affects children and young adults of male gender growing to an average size of 1-2 cm with near equal incidence in right and left sides. This study will aid and guide physicians in diagnosing and treating the infection in endemic areas. Morphological appearance alone in a few cases failed to give diagnosis of rhinosporidiosis, hence its diagnosis, when detailed clinical history is carried out, with approach in epidemiologist data, physical and histopathologic examination is relatively easy.

REFERENCES:

[1] Herr RA, Ajello L, Taylor JW, Arseculeratne SN, Mendoza L (1999) "Phylogenetic Analysis of RhinosporidiumSeeberi's 18S Small-Subunit Ribosomal DNA Groups This Pathogen Among Members of the ProtoctistanMesomycetozoa Clade" J ClinMicrobiol, 37: 2750-4.
[2] Chao SS, Loh KS (2004) "Rhinosporidiosis: An Unusual Cause of Nasal Masses Gains Prominence" Singapore Med J, 45(5): 224-6.
[3] Rosai J "Respiratory tract" in: Rosai and Ackerman's surgical pathology, 10th edition, Milan, Elsevier, 2011: 293.
[4] Nayak S, Acharjya B, Devi B, Sahoo A, Singh N (2007) " Disseminated Cutaneous Rhinosporidiosis " Indian J DermatolVenereolLeprol, 73(3):185-7.
[5] Chritravel V, Sundaran BM, Subramanian S, Kumaresan M, Kunjithapatham K (1990) "Rhinosporidiosis in man: case reports" Mycopatholgia, 109:11-12.
[6] Purandare NM, Deores SM (1953) "Rhinosporidiosis in man" Ind J Med Sci, 7:103.
[7] Pal DK, Mallick AA, Majhi TK, Biswas BK, Chowdhury MK (2012) "Rhinosporidiosis in southwest Bengal" Tropical Doctor, 42(3):150-153.