

Clinico-demographic Profile of Aural Myiasis Cases in Tertiary Care Center- A Prospective Study

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ABSTRACT

Introduction: Patients showing poor hygienic habits like mentally ill patients, abandoned individuals etc. have higher chances of Myiasis. Myiasis generally affects skin and mucosa. Myiasis may affect nose, ears, paranasal sinuses, nasopharynx etc. Aim of present study is to find out the clinico-etiological profile of aural myiasis cases and its relationship with social factors.

Material and Methods: Present study was conducted on sixteen patients of aural myiasis in the Department of E.N.T at tertiary care hospital in Banda over the period of one year i.e. January 2019- December 2019. All the patients of maggots in ear were included in the study. In aural myiasis, turpentine oil soaked wick was placed in external auditory canal and with the help of Tilley's forceps; maggots were removed from the canal. Under antibiotic coverage, regular aural toileting was done.

Results: maximum cases (43.75%) belonged to age group 1-10 years followed by age group 61-80 years (31.25%). Seven cases (43.75%) were male while 9 patients (56.25%) were female showing female dominance over male. Majority of cases (68.75%) were from lower socio-economic group. Most common symptoms (in 81.25% cases) were the passage of worm and fever followed by pain in ear (in 62.50% cases).

Conclusion: Aural myiasis commonly affects extremities of ages i.e. pediatrics and geriatrics population with female predominance. Due to illiteracy, lower socio-economic status and poor hygiene, people living in slum areas have higher chances of aural Myiasis. Therefore maintaining hygiene is important component in the prevention of aural myiasis.

Keywords: Aural Myiasis, Maggots, Antibiotics, Extremities.

INTRODUCTION

Myiasis is defined as infestation by dipterian larvae of necrotic or immune-compromised living host tissue.^{1,2} Patients showing poor hygienic habits like mentally ill patients, abandoned individuals etc. have higher chances of Myiasis.³ Myiasis generally affects skin and mucosa. When fly larvae depend on the host for completion of their life cycle, it is called "obligatory Myiasis." On the other hand, when larvae are free living, it is called "facultative myiasis." When the fly larvae infest a host who is not involved in their living cycle, it is called accidental myiasis. Facultative/accidental Myiasis is the most common form in human and cutaneous myiasis is the most prevalent.⁴ Myiasis may affect nose, ears, paranasal sinuses, nasopharynx etc. Aim of present study is to find out the clinico-etiological profile of aural myiasis cases and its relationship with social factors.

MATERIAL AND METHODS

Present study was conducted on sixteen patients of aural myiasis in the Department of E.N.T at tertiary care hospital in Banda over the period of one year i.e. January 2019- December 2019. All the patients of maggots in ear were included in the study. Demographic and clinical parameters like age, gender, socio-economic status, occupation, site of Myiasis etc were collected. Detailed history especially for ear discharge, earache, aural bleeding etc was taken. History for systemic diseases like diabetes, anemia, HIV etc was also recorded.

General examination was done to assess the nutritional status and to find out the systemic disease. Detailed examination of ear was conducted with the help of otoscope. Routine investigations like blood sugar level, CBC, liver and kidney function test were carried out. In aural myiasis, turpentine oil soaked wick was placed in external auditory canal and with the help of Tilley's forceps; maggots were removed from the canal. Under antibiotic coverage, regular aural toileting was done. All maggots were disposed off after putting them in boiling water.⁵

RESULTS

Table 1 shows the demographic profile of the cases suffering from aural myiasis. In present study, maximum cases (43.75%) belonged to age group 1-10 years followed by age group 61-80 years (31.25%). It shows that maximum cases belonged to extremities of age. Study done by Mallik et al.² also observed similar findings. There was higher distribution of cases in pediatrics and geriatric age groups similar to present study. In present study, out of 16 patients, 7 (43.75%) were male while 9 patients (56.25%) were female showing female dominance over male. Study done by Singh et al.⁶ also showed female preponderance over male and in their study, 57.8% cases were females in comparison of 41.8 % cases of male.

In present study, 9 cases (56.25%) of aural myiasis were residing in urban slum areas followed by 5 cases (31.25%) in

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S. No.	Variables	No. of cases	% of cases
1	Age group in years		
	1-10 years	7	43.75%
	11-40 years	1	6.25%
	41-60 years	3	18.75%
	61-80 years	5	31.25%
	Total	16	100.0%
2	Gender		
	Male	7	43.75%
	Females	9	56.25%
	Total	16	100.0%
3	Residence		
	Urban slum area	9	56.25%
	Rural slum area	5	31.25%
	Well urbanized area	2	12.50%
	Total	16	100%
4	Religion		
	Hindu	11	68.75%
	Muslim	5	31.25%
	Total	16	100%
5	Socio-economic status		
	Higher SES	01	6.25%
	Middle SES	04	25.0%
	Lower SES	11	68.75%
	Total	16	100%
6	Occupation		
	Farmer	07	43.75%
	Homemaker	05	31.25%
	Student	02	12.50%
	Others	02	12.50%
	Total	16	100%

Table-1: Demographic Profile of Cases in Present Study

S. No.	Variables	No. of cases	% of cases
1	Sign & symptoms		
	Pain in ear	10	62.50%
	Passage of worms	13	81.25%
	Ear discharge	9	56.25%
	Bleeding from ear	8	50.0%
	Maggots in ear	16	100.0%
	Fever	13	81.25%
	Otitis externa	5	31.25%
	Ulcer over pinna	4	25.0%
	Pre-auricular ulcer	2	12.5%
	Others	2	12.5%
2	Site of Myiasis		
	EAC myiasis	12	75.0%
	Pinna myiasis	02	12.5%
	Pre-auricular myiasis	01	6.25%
	Post-auricular myiasis	01	6.25%

Table-2: Clinical Profile of Cases in Present Study

rural slum areas. Only 2 cases (12.50%) were residing in well urbanized areas. Majority of cases (68.75%) in present study were from lower socio-economic group while only 1 case (6.25%) was from higher socio-economic group. Studies

done by Gabriel JG et al³ and Al Jabr I⁷, also observed that illiteracy, lower socio-economic status and poor hygiene are significant predisposing factors for aural myiasis. Majority of patients (68.75%) belonged to Hindu religion while only 5 cases (31.25%) were from Muslim religion. In present study, maximum cases (43.75%) have the occupation related to farming and animal husbandry followed by 5 cases (31.25%) related to housewife/ homemaker. Study done by Mallik et al.² also observed similar results while Arora et al.⁸ observed different results from present study. They observed maximum cases (60%) were related to homemaker while in our study, maximum cases (43.75%) were related to farming and animal husbandry.

Table 2 shows the clinical profile of cases in present study. In this study, most common symptoms (in 81.25% cases) were the passage of worm and fever followed by pain in ear (in 62.50% cases). On examination, in all cases maggots were present in ear. Study done by Magliulo et al.⁹ also revealed that patient suffering from aural Myiasis represented in hospital with the complaint of earache, ear discharge, itching in ear, tinnitus etc.

In present study, most common site of Myiasis was external auditory canal (75.0% cases) followed by pinna in 12.5% cases. Study done by Cho GH et al.¹⁰ also observed Myiasis in external auditory canal. All cases of aural Myiasis were managed with manual and endoscopic removal of maggots. Regular dressing with antibiotic cover was done to prevent further laying of eggs. Significant reduction in maggot's count was seen in 3-4 days after treatment. Diagnosis of aural myiasis can be done by otoscopic examination. In tympanic membrane perforation cases, patient should be examined for auditory function before and after removal of maggots.

CONCLUSIONS

From present study, it can be concluded that aural myiasis commonly affects extremities of ages i.e. pediatrics and geriatrics population with female predominance. Due to illiteracy, lower socio-economic status and poor hygiene, people living in slum areas have higher chances of aural Myiasis. Majority of person are associated with the occupation related to farming and animal husbandry. Therefore maintaining hygiene is important component in the prevention of aural myiasis. Death due to aural myiasis is very uncommon. Treatment part consists of manual and endoscopic removal of maggots. Regular dressing with antibiotic cover should be done to prevent further laying of eggs.

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