ABSTRACT

AIM

To analyse the clinical presentation and response to medical treatment in ocular toxocariasis.

METHODS

Thirty patients of OCULAR TOXOCARIASIS of age less than 18 years with anti toxocara IgG / IgM positive cases were included whereas patients more than 18 years of age, positive for TORCH screening, with active signs of tuberculosis and significant ocular trauma were excluded from the study. They were subjected to detailed history, anterior segment examination, best corrected visual acuity, intraocular pressure recording, B scan, detailed fundus examination using direct ophthalmoscopy, slit lamp biomicroscopy with 90D lens and indirect ophthalmoscopy. Complete investigation like blood count, ESR, Mantoux test, chest X- ray, rheumatoid factor, X- ray spine, HLA B27, TORCH screening, serum ACE level, ELISA for toxocara was done before clinching onto the diagnosis. All the patients had ELISA (either IgM or IgG) positive for toxocara. The study population was treated with oral Albendazole 15mg/kg body weight twice daily for 14 days along with oral Prednisolone 1mg/kg body weight. Patients were followed up at 2^{nd}, 4^{th} week, 3^{rd} and 6^{th} month. At each visit patients best corrected visual acuity, intraocular pressure and fundus changes with response to treatment were documented to check for progression / regression.

RESULTS:

In our study, maximum number of patients were found in the age group of 7-9 years with a slight male preponderance, accounting for 56.7% of patients. All the patients had unilateral involvement with left eye affected more commonly than the right eye which constitutes 57%. 60 % of the patients presented with complaints of defective vision, 40 % with redness, 26.7% with pain, 16.7% with deviation of eyeball and floaters each. 40% of the total study population acquired the infection due to Geophagia and about 66.7% had a history of contact with pets. 22.73% of the study population had vision in the range 2-1.3 by log MAR chart, 18.8% had vision between 1.2 to 1 and 59.09% had vision ranging between 0.8 to 0.6. 17% of the patients showed an increase in the intraocular pressure in the affected eye ranging from 21-24 mmHg. All the patients were positive for IgG of which 17% showed an active infection. In our study 13% of the patients had eosinophilia (> 500 eosinophils / micro-litre or ≥ 10 % total WBC count). About 23.3% of the total study population presented with features of anterior uveitis, and 56.7% presented with vitritis. Most of the patients presented with peripheral granuloma which constitutes 66.7% of the study population, 26.7% of the patients showed posterior pole granuloma and 6.6% of the patients presented with chronic endophthalmitis which was the least common clinical presentation of the fundus. In our study as the grading of vitritis increases, presenting vision of the patients in log MAR unit tends to increase which indicates significant visual loss. Pearson correlation analysis showed a correlation coefficient of 0.7642 and p value <0.01 which is statistically significant. In our study, mean vision of patients before treatment was found to be 1.12 and after treatment was 0.74 in log MAR units with p value <0.01,

which is statistically significant. Improvement in mean vision before and following treatment in patients with chronic endophthalmitis is 1.45, in peripheral granuloma it is found to be 0.33 and 0.25 in posterior granuloma.

CONCLUSION

Our study concludes that ocular toxocariasis mostly affects children in the age group 7 to 9 years old with a male predominance. Most of the patients presented with peripheral granuloma which constitutes 66.7% of the study population followed by posterior pole granuloma in 26.7% and chronic endophthalmitis in 6.6% of the patients. Patients presented with posterior pole granuloma showed minimum improvement in visual acuity due to the location of the granuloma involving the fovea. Patients presented with chronic endophthalmitis had best prognosis followed by peripheral granuloma. Ocular toxocariasis is a great masquerade and needs to be considered in the differential diagnosis of leukocoria in children. Evaluation of proper history, constitutional symptoms of toxocara infection as well as laboratory workup including ELISA and complete blood count assist in diagnosis. Treatment with anti-helminthic agents and systemic steroids hasten recovery of ocular symptoms and fundoscopic findings, and prevents irreversible vision loss.

KEYWORDS: Ocular toxocariasis, chronic endophthalmitis, peripheral granuloma, posterior pole granuloma, geophagia, eosinophilia, contact with pets, ELISA