



Case Report

Polyparasites in Immunocompetent with Renal Calculi - A Case Report

Sowmya Nasimuddin¹, Jeevan Malaiyan¹, Mohanakrishnan Kandaswamy²,
Sumathi Gnanadesikan², Savitha Sambamoorthi³

¹Assistant Professor, ²Professor, ³Tutor,

Department of Microbiology, Sri Muthukumaran Medical college Hospital & Research Institute, Chikkarayapuram,
Chennai - 600069, Tamil Nadu, INDIA

Corresponding Author: Sowmya Nasimuddin

Received: 27/04/2015

Revised: 15/05/2015

Accepted: 01/06/2015

ABSTRACT

Infections caused by multiple parasites are common in endemic regions of the world. Here we report a case of polyparasitic infection in immunocompetent with renal calculi. The parasites observed are *Hymelopsis nana*, *Ancylostoma duodenale*, *Trichuris trichuria* and *Strongyloides stercoralis*. This is the second case of renal calculi with polyparasitic infection in a patient with renal calculi reported from our hospital.

Key Message: A second case of immunocompetent with renal calculi also chronically co-infected with four different parasites

Key-words: Polyparasitic infections, renal calculi, immunocompetent

INTRODUCTION

Infections caused by intestinal parasites are not so uncommon in endemic regions of the world and may vary by geographical distribution, host factors and environmental factors. [1] Infection with multiple parasites occurs most commonly in immunocompromised, [2] but also in immunocompetent. [3] Here we report a case of polyparasitic infection with *Hymelopsis nana*, *Ancylostoma duodenale*, *Trichuris trichuria* and *Strongyloides stercoralis* in a patient with renal calculi. Similarly a case of renal calculi with *Strongyloidiasis*, *giardiasis* and *Entamoeba coli* was reported by us previously [4] Hence, the correlation of renal calculi and parasitic infections needs more limelight in future.

CASE HISTORY

A 42 years old male patient came with the history of pain in the lower abdomen, anal itching and back pain for the past six months. He gives history of taking bath in well water seven months back. He is a chronic smoker and alcoholic. He gives history of recurrent renal calculi for which he was subsequently treated. His general and systemic examinations were normal. His blood and urine analysis were normal. Ultrasound of urinary system shows multiple renal calculi in left kidney with the maximum being 5mm in size.

Examination of stool

Macroscopically yellow coloured soft sample with no visible blood and mucus is observed. Microscopically negative for pus

cells and occult blood. Presence of three different ova and a larval form is observed. Spherical shaped non-bile stained egg with two distinct membranes and polar filaments of *Hymelopsis nana* ; oval non-bile stained egg with thin cell wall, clear cytoplasm and segmented blastomeres of *Ankylostoma duodenale* (Figure 1); barrel shaped, bile stained egg with mucous plug at each pole with an unsegmented ovum of *Trichuris trichuria* were observed (Figure 2). An actively motile larval form of *Strongyloides stercoralis* with short mouth and double-bulb oesophagus was also seen (Figure 3).



Figure 1: Ova of Hookworm with clear cytoplasm and blastomeres



Figure 2 : Ova of *Trichuris trichuria* with bipolar plugs



Figure 3 : Larvae of *Strongyloides* spp

DISCUSSION

Polyparasitic infections, though rare tend to occur more commonly in immunocompromised people. [2] In immunocompetent usually they are asymptomatic. Acute strongyloidiasis are usually manifested as profuse diarrhea, abdominal pain and vomiting; chronic infections shows nausea and abdominal pain. Cutaneous symptoms such as petechiae, congestion, pruritus and pulmonary symptoms like dyspnoea, wheezing, hemoptysis also occurs in various stages of infection. Rai et al. reported polyparasitism with four nematodes including strongyloidiasis. [3]

The dull aching, non - radiating abdominal pain with episodes of diarrhea is most commonly due to chronic parasitic infection. The associations of various glomerular diseases and the parasites have been reviewed by Van velthuysen et al. The pathogenesis is attributed to the role of immune response while fighting parasitic infections also causes damage to the glomerular epithelium resulting in various glomerulopathies. [5] But till date no data's are available to show the association of these parasites and renal calculi. This emphasizes the need of future studies to describe the coexistence of parasitic

infections with various other systemic diseases.

REFERENCES

1. Bannon JP, Fater M, Solit R. Intestinal ileus secondary to Strongyloides stercoralis infection: case report and review of the literature. *Am Surg* 1995; 61: 377-80.
2. Paul B. Keiser and Thomas B. Nutman Strongyloides stercoralis in the immunocompromised population *Clin Microbiol Rev* 2004 ; 17(1) : 208–17.
3. Rai S, Wadhwa V, Kharbanda P, Uppal B. A case of poly-parasitism involving a trematode and four different nematodes in a migrant from bihar, *Indian J Med Microbiol* 2007; 25(1) :62-3
4. Sowmya N, Jeevan M, Sumathi G, Mohanakrishnan K. A Case Report of Strongyloidiasis associated with Giardiasis in a Patient with Renal Calculi from a tertiary Care Center in South India. *JGID* 2014; 6(3):137.
5. Van velthuysen M- I. F, Florquin S. Glomerulopathy associated with parasitic infections. *Clin Microbiol Rev* 2000; 13(1): 55–66.

How to cite this article: Nasimuddin S, Malaiyan J, Kandaswamy M et.al. Polyparasites in immunocompetent with renal calculi - A case report. *Int J Health Sci Res.* 2015; 5(7):526-528.

International Journal of Health Sciences & Research (IJHSR)

Publish your work in this journal

The International Journal of Health Sciences & Research is a multidisciplinary indexed open access double-blind peer-reviewed international journal that publishes original research articles from all areas of health sciences and allied branches. This monthly journal is characterised by rapid publication of reviews, original research and case reports across all the fields of health sciences. The details of journal are available on its official website (www.ijhsr.org).

Submit your manuscript by email: editor.ijhsr@gmail.com OR editor.ijhsr@yahoo.com