CASE REPORT

A Case Report On Chyluria-Non Filarial Origin

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ABSTRACT

BACKGROUND: Filarial infections are common in most tropical and subtropical regions of the world. Chyluria is endemic in the Gangetic belt of India almost exclusively caused by Wucheria Bancrofti in tropical areas. Here we present a case of chyluria in which patient complaining of milky white urine with burning sensation and weight loss. No proven microfilarial infection was there in the patient. IVP studies were found to be normal. Treatment of the patient was done conservatively with help of plenty of fluids orally and DEC (Diethylcarbamezine), dietary restrictions. Patient improved the symptoms after the treatment.

Keywords: Chyluria, Filarial, Filarial antigen

INTRODUCTION

Chyluria is a medical condition involving the presence of the chyle in the urine stream, which results in urine appearing milky white.[1] Chyluria has been rampant in our country especially the Gangetic belt since time immemorial.Chyluria is more common in India, china, Indonesia.[2] In tropical countries more than 95% of it is caused by parasitic infestation with Wuchereria Bancrofti.[3] The parasite is spread by mosquitoes of the genera Anopheles, Culex and Aedes. Water logged areas promote the growth of these mosquito. Chyluria occurs in 2% of filarial infested patients. Bancrofti, other parasitic causes of Chyluria include Eustrongylus gigas, Taenia echinococcus, Taenia nana and malarial parasites. In filariasis, the filarial are transmitted through a mosquito bite, with multiple mosquito species serving as possible vectors for transmission. The mosquito transmits third stage larvae which are deposited into the skin.

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The larvae travel to the lymphatic system and develop into adult worms usually by nine months, the adult worms live in the lymphatic where they mate and produce microfilaria (first stage larvae) which through are intermittently another mosquito showered bite, into these the bloodstream. Microfilaria are uptake fromhuman blood stream by mosquito bites, over a period of 10-14 days they develop into second and then third stage larvae in the mosquito. The mosquito then bites another human, third stage larvae enter the skin and the life cycle is completed. The adult worms live an average of five years, and it is the dying worms rather than the microfilaria which are responsible for most symptoms, as they incite an inflammatory reaction which results in lymphatic damage and obstruction. Patients may have recurrent episodes of lymphadenitis with fever and malaise, and repeated attacks lead to chronic manifestations of hydrocele, lymphedema, elephantiasis, and Chyluria. Due to the lymphatic obstruction. Dilation of these vessels occurs, as well as backflow of chyle and fistula formation to the urinary tract.

Other non parasitic causes include congenital obstruction, lymphangioma, trauma, radiation, malignancy and following surgery. The clinical manifestations are directly related to occlusion of the lymphatic channels, causing lymphangiectasia.[4] Chyluria is the passage of intestinal lymph in the urine. The pathophysiology of chyluria involves

obstruction or dilatation of retroperitoneal lymphatic. The retroperitoneal lymphatics include a number of lymphatic trunks draining the kidneys and intestinal lymphatic draining the intestine, pancreas and spleen. Long term Chyluria causes the malnutrition and fat soluble vitamin deficiency.[5] Dietary advice for Chyluria is the low fat diet and plenty of fluids orally.[6]

CASE PRESENTATION:

A 64 year old male patient non diabetic, non-hypertensive coming from Porbandar, Gujarat presented with chief complain of burning micturation with milky white urine since 3 months. There was no history of fever, nausea, vomiting, headache, swelling of the limbs or swelling anywhere in the body. No similar past history was given by the patient. Patient has the history of CBD stenting for CBD stone followed by lap converted to open cholecystectomy before two years. The patient was admitted, investigated and antibiotics with plenty of fluids orally were advised.

Following were the investigations done for the patient:

Hb=14.9 gm/dl	HIV = non reactive
TC = 5500 cells/cumm	HbsAg= negative
PC= 1.8 lac cells/cumm	Absolute Eosinophilic count-70
RBS=83 mg/dl	D.Bilirubin = 1.1 mg/dl
S.Creatinine = 0.8 mg/dl	T. Bilirubin= 2.5 mg/dl
S.ALP=50IU/L	S.ALT=30 IU/L

Urine routine examination suggestive of 1-2 pus cells, trace in quantity albumin, no any triglycerides in urine. USG Abdomen pelvis (Full bladder) - Liver is normal in the echotexture and no any IHBR. Irregular thick wall of urinary bladder.

Prostate = 18cc

PVRU = 20cc

X-ray KUB = NAD

IVP –Normal Study.

Peripheral blood smear for microfilaria-no any micro filarial parasite found.

Filarial Antibody detection Test-Negative.

IMAGE SHOWS MILKY WHITE URINE

DISCUSSION

In the endemic areas, up to 10% may be affected by filariasis.[3]Other than filariasis, there are other infectious and non-infectious causes of chyluria that include tuberculosis, fungal infections, Hansen's disease, malignancy (genitourinary, gastrointestinal, thoracic duct or thyroid tumours), trauma, pregnancy, hydrocele, and inguinal hernia. There are case reports of chyluria being caused by a thoracic aortic aneurysm and following cardiac catheterization. In severe cases, chyluria can cause hypoproteinemia, nutritional deficiencies, iron deficiency anemia, weight loss, and abnormalities of the immune system. The initial evaluation of chyluria involves urinalysis and urine culture to evaluate for possible infection. Naked eye examination of the urine after it stands for a few hours may reveal a film of fat. Further analysis includes Sudan stain to confirm the presence of fat droplets. Lipid electrophoresis to evaluate for chylomicrons or measurement of cholesterol and triglyceride levels in the urine. Ultrasound and lymphoscintigraphy are useful in demonstrating evidence of abnormal lymphatic drainage, and are less invasive and have less potential complications than lymphangiography if filariasis is suspected. Eosinophilia is a nonspecific finding and peripheral blood smears should be obtained to evaluate for microfilaria .Anti filarial antibody tests are available. But cannot distinguish between active or prior infections, and also cannot

differentiate between the types of filarial infections. Circulating filarial antigen tests are considered the gold standard to diagnose infections from Wuchereria Bancroft. Various strategies are available to manage chyluria. Conservative measures include bed rest, abdominal binders that increase intra-abdominal pressure to prevent further chyle leakage, and dietary modifications to include a high protein diet, and low fat diets supplemented with medium chain triglycerides. Lymphangiovenous anastomosis also has a limited success rate; postoperative Chyluria secondary to incomplete fistula closure may persist in 50-60% of the patients. The most effective and long-term treatment option involves nephrolysis. Surgical stripping of lymphatic connections to the kidney which have been performed using open surgical or laparoscopic techniques. There is an overall success rate of 98% with nephrolysis but the relapse rate approached 25% after two years of follow up due to new fistula formation or incomplete lyses. Nephrectomy and renal auto transplantation have also been described in patients who have failed the above approaches.

CONCLUSION

Chyluria caused by lymphatic filariasis is a public health problem in our region .Chyluria can be of parasitic, non parasitic origin. It is essentially a benign disease which can be effectively controlled by public awareness, drugs and dietary restrictions. A small portion of patients have severe and unrelenting disease which requires surgical intervention .Filariasis as an endemic tropical disease requires medical control and community participation as well for its control. Here the case of Chyluria is of nonparasitic origin, no proven filarial infection detected, no any urinary tract abnormality found .Patient treated conservatively with dietary restrictions and patient has improved the symptoms. So this is a rare case of Chyluria of non parasitic origin, probable cause is previous surgery leading to fibrosis and lymphatic obstruction leading to Chyluria.

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