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Adrenal Histoplasmosis Not So Rare? - A Case Report with Review of Literature

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Abstract: *Histoplasmosis is a rare fungal infection reported in immunocompromised patients. We report a case of adrenal histoplasmosis in a diabetic patient with cirrhosis of liver with portal hypertension who presented with prolonged fever malaise and weight loss for 4 months. His imaging studies showed bilateral adrenal mass which on ultrasound guided FNAC and subsequent culture showed growth of H.capsulatum. He improved on treatment with amphotericin B and subsequent switch over to Itraconazole along with diabetic control. Though considered rare, histoplasmosis may be not so uncommon in North-East India. Any case presenting with unilateral or bilateral adrenal enlargement must be thoroughly screened for histoplasmosis. Physicians need to be aware of the possibilities of other forms like pulmonary and mucocutaneous histoplasmosis. Considering the climatic conditions and predominant preoccupation of the population with farming and poultry a thorough epidemiological survey with skin test for histoplasma antigen will reveal the actual endemicity of this disease.*
Keywords: *Histoplasma capsulatum, adrenal masses, adrenal histoplasmosis, immunocompromised,*

I. Introduction

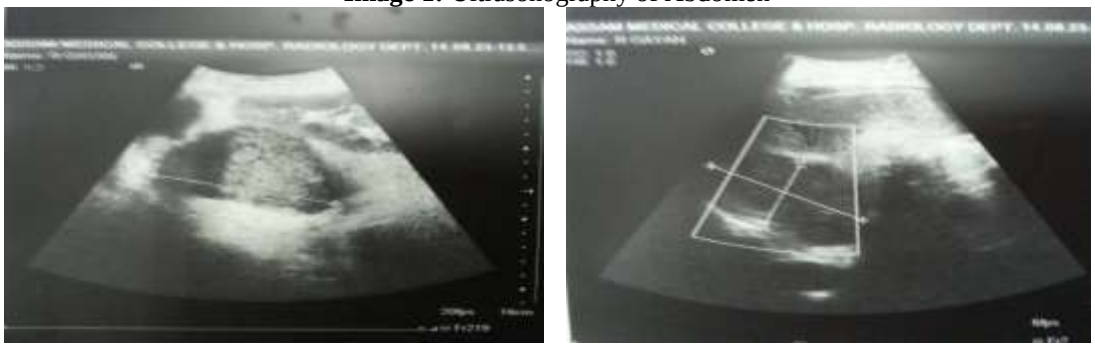
Histoplasmosis is a rare fungal infection that has been scarcely reported in literature. It is mostly reported in severely immunocompromised patients, usually HIV infected patients and only from few geographic regions. We have not found literature of Adrenal Histoplasmosis in this part of our country and hence report this rare case of Adrenal Histoplasmosis in a immune-compromised patient.

CASE

A 62 year old diabetic male, poultry farm worker, presented to our clinic with prolonged fever, malaise and marked weight loss for4 months. Fever was mild in severity, intermittent in nature, associated with generalised body ache and night sweats, responded to antipyretic medications but recurred after few hours. There was also significant polyuria, loss of appetite and weight loss (about 12kg). He was chronic alcoholic and smoker for last 30 years.

His laboratory reports showed normocytic normochromic anaemia (HB-6.7gm%, ESR-140 AEFH,TC-4400,N-49,L-33,E-10,B-0,M-8). His HbA1c was 5.5 % and he was on Metformin 500 mg daily. Urine, Liver Function Test, Renal Function Test and Thyroid profile were within normal limit.Ultrasonography of abdomen shows heterogeneous hypo echoic mass lesions at adrenals with minimum vascularity on colour doppler study, chronic liver disease with cirrhotic changes, splenomegaly, ascites, portal hypertension. Chest X ray was unremarkable.Serum Cortisol at 6am-normal, 24 hours urinary cortisol –normal ,HIV, HBsAg, Anti HCV, Mantoux Test were all negative.His upper Gastro intestinal endoscopy showed chronic active DU, active antral ulcer and multiple grade III oesophagealvarices.

Image 1: Ultrasonography of Abdomen

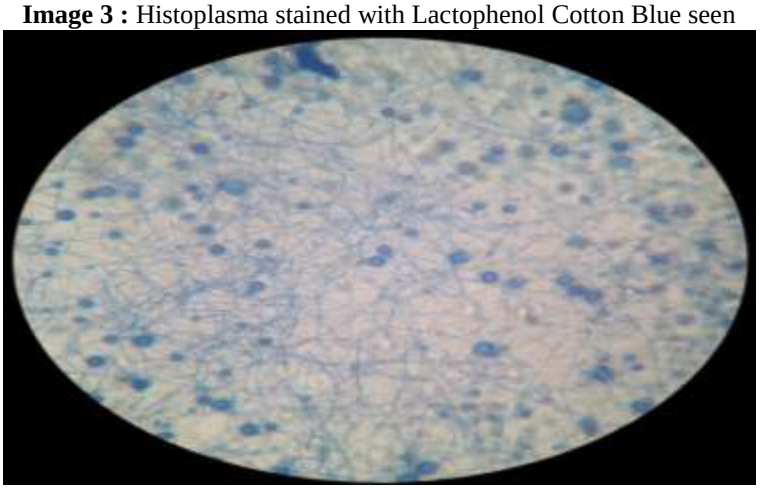


His CT scan abdomen was done which revealed bilateral adrenal masses measuring 6.4 x 7.9 cm (right) and 7.9 x 8.1 cm (left) respectively.

Image 2 : CT scan of Abdomen

Ultrasonography guided fine needle biopsy was done under local anaesthesia and the specimen showed cluster of macrophages with abundant cytoplasm containing yeast form of the fungus under oil immersion when stained with Periodic acid Schiff stain.Fungal culture of the specimen in Sabouroud's dextrose agar showed growth of mould form of the fungus which on staining with Lactophenol Cotton Blue showed Histoplasma capsulatum. DNA sequencing finally confirmed Histoplasma Capsulatum var. capsulatum.

Image 3 : Histoplasma stained with Lactophenol Cotton Blue seen



The patient was treated with liposomal form of Amphotericin B daily as per body weight for 14 days. On discharge we advised oral itraconazole400mg daily with periodic monitoring of liver and renal function. He came for check-up twice at bi monthly interval which showed weight gain, no fever and a generalised sense of wellbeing. His repeat ultrasonography of abdomen revealed decrease in the size of both adrenal masses significantly.

II. Discussion

Though histoplasmosis has been found in all continents the highest number of cases has been found in the American continent[1]. The eastern United States and most of Latin America has been found to be highly endemic for histoplasmosis by skin testing surveys(Edward et al 1969)[2]. By 1970, culture positive cases were detected from Asia with majority of the cases from South –East Asia viz, Indonesia, Malaysia, Thailand and Vietnam (Randhawa 1979)[3]. The first case of histoplasmosis in India was reported by Panja and Sen in 1954[4]. Thereafter many cases have been reported sporadically mostly from eastern part of India (Goswami et al 1999)[5]. Spores of histoplasma capsulatum has also been isolated from soil of the Gangetic plain (Sanyal M 1975)[6].

Histoplasmosis has not yet been reported from any center in North-East India. This case report of adrenal histoplasmosis is an indigenous one as there is no history of travel outside state. The patient was an alcoholic, diabetic and a farmer by occupation. He was also regularly exposed to poultry. The climatic condition in this part of the country is hot and humid specially in summer season and is thus conducive for the growth of saprophytic fungus in soil.

However a study by Ram Gopalakrishnan et al in 2011 from Apollo hospital Chennai, which cater to a large population from not only south but also North-East India detected 24 cases of histoplasmosis out of which 11 were from north-eastern parts of India (9 from Assam and 2 from Tripura)[7]. RP Goswami et al, 1999 also reported cases from Assam[5]. This shows that histoplasmosis is probably undetected in north-east India due to lack of awareness and paucity of diagnostic facilities.

Infection with histoplasma develop when microconidia are inhaled into lungs where they transform into yeast form. Pulmonary infection is usually asymptomatic or self limited in majority. However some individuals develop acute pulmonary infection or progressive disseminated disease from haematogenous dissemination[8]. The latter usually develops in immunosuppresed patients, as in HIV positive individuals. In other individuals a more indolent type of disseminated histoplasmosis (chronic disseminated histoplasmosis) may be seen[9]. They usually present with adrenal involvement and oral ulceration. Our patient was found to be a case of chronic disseminated histoplasmosis.

Adrenal involvement in Histoplasmosis may be unilateral or bilateral. Our case had bilateral adrenomegaly with no evidence of hypoadrenalism. Kauffman showed only 12 out of 58 elderly patients with histoplasmosis had adrenal involvement and none had adrenal failure[10].

Clinical presentations of chronic disseminated histoplasmosis vary and resemble other chronic infections like tuberculosis (Grover SB)[11]. They usually have low grade fever, significant weight loss, anorexia and night sweats. Our patient presented with similar symptoms.

Fine needle aspiration cytology (FNAC) or percutaneous biopsy is the best method to differentiate and diagnose the pathology. Our patient underwent FNAC and material showed growth of H.capsulatum.

Mortality in untreated cases is very high but with treatment falls significantly. The recommended treatment is Amphotericin B for seriously ill followed by long term oral Itraconazole. For relatively stable patients oral Itraconazole alone is effective. Treatment is recommended for one to two years to prevent relapse[12]. Our patient was treated initially with liposomal Amphotericin B for 14 days followed by oral Itraconazole with good results.

III. Conclusion

To conclude Histoplasmosis considered to be a very rare entity might not be so uncommon in north-eastern part of India. Any case presenting with unilateral or bilateral adrenal enlargement must be thoroughly screened for histoplasmosis. Physicians need to be aware of the possibilities of other forms like pulmonary and mucocutaneous histoplasmosis. Considering the climatic conditions and predominant preoccupation of the population with farming and poultry a thorough epidemiological survey with skin test for histoplasma antigen will reveal the actual endemicity of this disease.

Reference

[1]. Furcolow ML (1963) Tests of immunity of histoplasmosis, NEJM 268,357-361
[2]. Edward LB, Aquaviva FA, Liversay VT et al (1969) An atlas of sensitivity to tuberculin, PPD-B and histoplasmin in united States. American review of Respiratory disease 99(Suppl).1-132
[3]. Randhawa HS (1979) Occurrence of histoplasmosis in Asia. Mycopathologica et Mycologia Applicata; 41,75-89
[4]. Panja G and Sen S. A unique case of histoplasmasmosis; Journal of Indian Medical Association 1954; 23:257-258
[5]. Goswami PB, Pramanik N, Banerjee D, Maiti PK, Histoplasmosis in Eastern India : The tip of the iceberg ?, Tropical Medicine of Hygiene; September 1999, P3(5):540-2
[6]. Sanyal M, Thammayya A. Histoplasma capsulatum in the soil of Gangetic plain of India; Indian Journal of Medical Research 1975;53:185-189
[7]. Gopalakrishnan R, Nambi KA, Subramanium VR, Ghafur KA, Parameswaran A, Histoplasmaosis in India: Truly uncommon or uncommonly recognised, Japi; October 2002, Vol 60
[8]. Wheat LJ. Histoplasmosis. A review for clinicians from non-endemic areas. Mycoses 2006; 49:274-282
[9]. Goodwin RA Jr, Shapino JL, Thurman GH, Thurman SS, Des Prez RM, Disseminated histoplasmosis : Clinical and pathological correlations. Medicine (Baltimore) 1980;59: 1-3
[10]. Kauffman CA. Fungal in fections in older adults. Clin Infect Dis 2001;33:550-5.
[11]. Grover SB, Midha N, Gupta M, Sharma V, Talib VH. Imaging spectrum in disseminated histoplasmosis- Case report and brief review. Australas Radiol 2005; 49:175-178
[12]. Johnston AW, Brown PA, Ewer SW. Histoplasmosis- a ten year follow up. The journal of Infection 1996; 33: 111-113