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RESEARCH ARTICLE

CO-INFECTION OF HIV AND CRYPTOSPORIDIUM IN A HAEMOPHILIC PATIENT

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ABSTRACT

Cryptosporidium is an opportunistic protozoan parasite that can cause severe diarrhoea in immunocompromised patients. Here we report a case of 8 years old male child who was haemophilic admitted with complaints of epistaxis. On routine investigation for epistaxis CBC, HIV, malaria and dengue were done and patient was diagnosed a case of HIV,(malaria ,dengue negative). Parents were HIV negative. FactorVIII was given 3-7times after each episode of injury. As patient was underweight and was malnourished. His stool examination was done which was negative for ovacyston iodine and saline preparation button modified ZN (1%) enormous number of cyst were seen which were microsporidic and cryptosporidium.

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INTRODUCTION

Transfusion-transmitted infections (TTI) are serious complications at Haemophilia patients treated by factor VIII and IX concentrates (Goedert *et al*., 2002). Multitransfused haemophiliacs with antihaemophilic products are endangere of acquiring viral hepatitis (Sharara, 1996). Inimmunocompetent persons, cryptosporidiosisis self-limiting, but immunocompromised patients, particularly HIV infected individuals with low CD4+T-cell counts (<180 cels/µl), can experiences diarrhoea, which can be life threatening (Cama et al., 2007). C.parvum and C.hominis are the most frequently reported species in human infections, but in the past few years, zoonotic Cryptosporidium species and genotypes, Such as C.meleagridis, C.felis , C.canis, C.muris, and C.suis, have been detected (Sadraei *et al*., 2005; Matos, 2004). Case summary-Haemophilia A is a rare bleeding disorder caused by auto antibodies against factor VIII. Spontaneous bleeding in the various sites and severity is the most common clinical presentation. A 8years oldmale child was admitted with epistaxis in paediatric department, was given multitransfusion since 1 month after of his birth. He was diagnosed accidently when after circumcision, bleeding didn't stop and was diagnosed a case of haemophilia for which he was given multiple transfusions and factor VIII whenever he had bleeding episode. This time he was admitted in paediatric department due to complaints of epistaxis and chronic diarrhoea.

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On routine investigation for epistaxis CBC, HIV, malaria and dengue were done and patient was diagnosed a case of HIV-1 and confirmation was done in PPTCT using standard guidelines. Written consent from patient parents were taken and their HIV testing was done in PPTCT. Both parents were HIV were negative. Patient was referred to ART centre for further management and treatment. Patient was negative for malaria and dengue test, done by rapid card test using NS1 antigen and IgG, IgM antibodies (Fig.no.1). On routine investigation Haemoglobin was 11.4g/dl, haematocrit 35.1%, platelet count 255* 10^3 /uL, mean corpuscular volume 70.9fL, WBC12.21*10^3/uL, As patient was having chronic diarrhoea and malnutrition. His stool examination was done which was negative for ovacyston iodine and saline preparation but on modified ZN (1%) enormous number of sporozoan cyst were seen which were microsporidic and cryptosporidium (Fig.no.2).

Fig.1. Coombs RS for HIV testing showing positive result

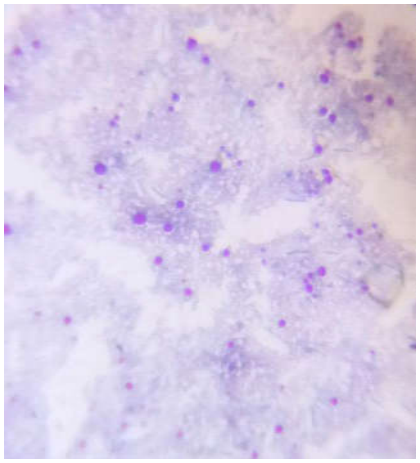
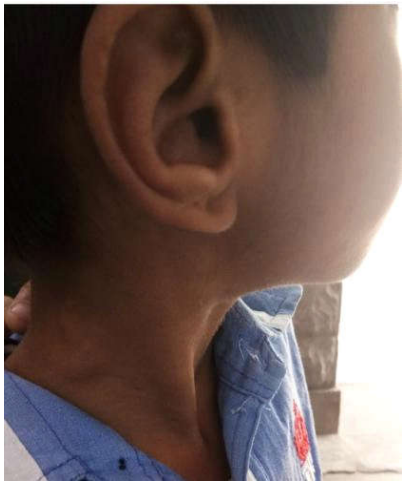


Fig. 2. Cryptosporidium in 40X (5%modified ZN)



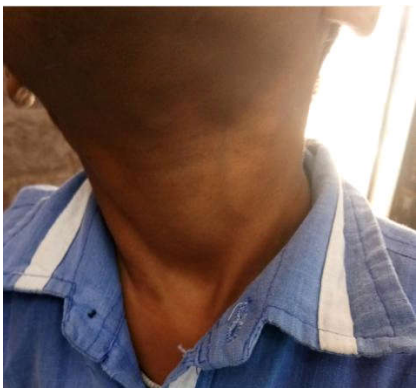


Fig. 3. Enlarge lymph nodes

DISCUSSION

One of the largest therapeutic problem during the continues treatment of the patients with Haemophilia A and B, are viral infections as Hepatitis B and C, and HIV and other infective diseases which can be transmitted by the transfusion of blood products. Any deficiency in the human immune system enables parasites to cross the barriers to the host, resulting in the possibility of infection by parasites. According to Bukurije, they had tested 75 patients with haemophilia A or B, used Elisa methods and data showed infection with HIV was 1.4% (Bukurijez hubietal, 2009). Some data suggesting that 80% of patients treated with Factor VIII concentrates have HIV antibodies (Carneiro-Proietti, 1998). Other authors published data suggesting higher rates of HIV infection in haemophilia A patients 69.4% (Peerlinck *et al*., 1993). Chronic cryptosporidiosis is responsible for considerable morbidity and some mortality among AIDS patients. In Tehran, Iran, 23 hospitalized AIDS patients were investigated for cryptosporidiosis in stool samples. The results confirmed two cases (8.7%) infected with Cryptosporidium sp., one of whom (4.3%) was infected with Isospora spp. This is the first report of cryptosporidiosis and isosporiasis co-infection in AIDS patients suffering from diarrhoea in Iran (Hosse in Nahrevanian, 2006). Data based on diagnosed cases of cryptosporidios is from the Centres for Disease Control (CDC) have resulted in an estimated prevalence of 2-5% for late-stage HIV infected patients (Current, 1991). This will promote assessment of the public health importance of various species and isolates of Cryptosporidium, and allow researchers to understand. Transmission dynamics better, to identify risk factors and reservoir hosts, and to establish preventive measures.

Conclusion

In any patient having history of repeated injections, blood transfusion weight loss and enlarge lymph nodes should be screen for transfusion transmitted illness like HIV, Hepatitis, HCV etc. and in patient of chronic diarrhoea sporozoan infestation should be ruled out for proper management of patient.

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