

Case Report

Case of thrush and weakness after pregnancy

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AIDS continues to be one of the infectious pandemics of our time. Pneumocystis pneumonia or today known as Pneumocystis Jeroveci is considered a deleterious infection in AIDS (acquired immunodeficiency syndrome) patients. Here we present a patient with oral candidiasis, respiratory distress suspicious of PCP (Pneumocystis carinii pneumonia), without any known risk factors for acquiring HIV who responded to PCP treatment. Since PCP is a dangerous disease, medical treatment in suspicious cases and diagnostic intervention for this AIDS defining illness continues to be prudent.

Key words: Acquired immunodeficiency syndrome (AIDS), Pneumocystis carinii pneumonia (PCP), HIV.

INTRODUCTION

AIDS continues to be an infectious pandemic and public information regarding prevention and transmission of illness remains important. Transmission is via mucosa and mucous secretions, blood and blood products and from mother to child. In Iran, 67% of the cases of AIDS are attributed to intravenous drug abuse and many cases are considered to be hidden (Shagerdi, 2008; Ghafari, 2008; Norouzi et al., 2008).

In this country, family counseling, birth control, use of condoms and counseling for prevention of dissemination of disease, CD4 counting, retroviral treatments, vaccination for tetanus, hepatitis, influenza and pneumococcus are available in teaching institutions and there is effort to provide education and services across the country. PCP is considered deleterious illness in patients with AIDS, hematologic malignancies, organ transplantees, patients with collagen vascular diseases and those who use immunosuppressive medications (Mu et al., 2009). Despite prescription of HAART medication for HIV positive patients, PCP remains at the top of the secondary infections in these patients (Lu and Lee, 2008).

A study in England in the past two decades has shown that PCP has been the diagnosing presentation for HIV+ individuals in 274 patients. Mean CD4 count was 34 cells/L and viral load was 3.5×10^5 copies/ml. Length of

life has improved and is attributed to mechanical ventilation (Travis et al., 2009).

Infections of the lung are most common cause of morbidity in immunocompromised hosts. PCP causes 10% of pneumonias in HIV-negative patients. Major symptoms are dry cough, dyspnea, fever, asthenia and weight loss. Chest X-ray predominately shows interstitial/alveolar infiltrates which can be asymmetric. Other possible findings are cysts, pneumothorax, and pleural effusions (Silva, 2010). In 5% of cases, chest X-ray can be normal (Huang and Crothers, 2009b).

Bronchoscopy and BAL is gold standard for diagnosis. Trimethoprim-sulfamethoxazole is first line of treatment and prophylaxis (Huang et al., 2011a).

Etiology of HIV-associated opportunistic pneumonias include bacterial, mycobacterial, fungal, viral and parasitic pneumonias. Bacterial pneumonia is among most common in US and Western Europe, while tuberculosis is dominant in Sub-Saharan Africa.

PCP continues to be found among people unaware of being HIV infected, those who do not get medical care, and those who do not get antiretroviral therapy and prophylaxis.

Treatment is trimethoprim-sulfamethoxazole for 3 weeks. Alternatives if necessary are available. Corticosteroids are added for moderate to severe PCP and PaO₂ below 70 mmHg or alveolar-arterial oxygen gradient greater than 35 mmHg (Huang and Crothers, 2009b).

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Presentation of case

The patient is a 24 year old lady from a small city, married farmer with two children the last of which was born two months ago. She was treated with antibiotic therapy 6 months prior to coming to our hospital and was pregnant at the time. She continued to develop progressive shortness of breath and dry cough. The patient complained of fevers, chills, loss of appetite and 15 Kg weight loss in one month. Prior to coming to this hospital, she was being treated as presumed tuberculosis without response. She noted being up-to-date on her immunizations. She denied receiving blood products or drug abuse. Although later, there was question whether her husband was forced into using drugs by his friends.

On physical oral examination, T 38°C, RR 14, HR 68, Blood Pressure 100/60 and oximetry without oxygen was 65%. She was weak with moderate respiratory distress. Thrush was noted in her oral cavity. Dental hygiene was average and enlarged lymph nodes were not palpated. Heart sounds were normal S1, S2 with no murmurs, rubs or gallops. Light crackles were heard at base of both lungs with decreased breath sounds. Abdomen was nontender but the spleen was palpable although she was thin lady. Neurology exam showed slight weakness of lower extremities and hyperreflexia. There was no clubbing, cyanosis or edema.

Chest radiography showed diffuse ground glass opacities throughout the lungs and lung spiral CT showed diffuse alveolar infiltrates.

Smear and culture for AFB was negative. Skin PPD test was negative. Bronchoscopy, biopsy and BAL was performed. There was no sign of cancer. Bone marrow biopsy was also negative for cancer. HIV Western blot was negative in native city but was repeated in this hospital and turned out positive.

The patient's second child, a daughter with weight of 2600 gm also developed respiratory distress, was found to have positive HIV viral titers and independent treatment was begun for her.

The patient was admitted with diagnosis of PCP, with work up for HIV, brucellosis, and collagen vascular disease. Treatment with cotrimoxazole, fluconazole, nystatin, ceftazidime and clindamycin was started. During hospital course, she developed pneumothorax. Otherwise, fevers of 38.5°C stopped, respiratory distress improved and she returned to some daily activities. PCP staining of BAL fluid turned positive. Anti HIV medications zidovudine, lamivudine and efavirenz with 5 mg of prednisone twice a day was begun. Laboratory findings are summarized in Table 1.

DISCUSSION

AIDS increases the risk of secondary infections, autoimmune disease and cancer. Illness shows itself within weeks after exposure to HIV in 50% of cases with

mononucleosis like syndrome. Secondary illnesses appear mostly with CD4 counts below 500 cells/mm³. Secondary infections and cancer are more likely with counts below 200. Common pathogens are candida albicans, PCP, MTB, Toxoplasmosis, Cryptococcus, MAI and CMV. Common neoplasms are Kaposi's sarcoma, non Hodgkin's lymphoma (generally high grade and involving the nervous system).

HAART treatment has prolonged life but is expensive (Lloyd, 1996). Now a days early treatment is considered to considerably decrease morbidity and mortality. There is emphasis on treatment of mothers and children and start of treatment with CD4 above 350 cell/MicroL is recommended.

Patients in developing countries have higher morbidity and mortality which is attributed to co infection with malaria, tuberculosis, malnutrition and anemia (Hobbs and Essajee, 2009). Immune reconstitution because of treatment is not well known and can be a contributing factor (Klotz et al., 2009).

PCP among deleterious infections in HIV+ patients rarely gives positive cultures and diagnosis is by microscopy of sputum or BAL fluid. Staining is with Wright-Giemsa and cysts stain with Gomori methenamine silver. Sensitivity by BAL fluid staining is 89% up to 98% (Krajicek et al., 2009).

Treatment is with trimethoprim-sulfamethoxazole with trimethoprim dosage of 15 mg/kg per day in 3-4 divided doses which is continued for 21 days. Intravenous treatment and corticosteroids are recommended with arterio-alveolar gradients of oxygen of 35 mmHg or blood pressure below 70 mmHg. Alternative treatments are clindamycin and primaquine, or pentamidine or trimetrexate and atovaquone. Intravenous pentamidine is prescribed for more severe cases (Mu et al., 2009). Newer treatments are under tria (Krajicek et al., 2009).

Methods to prevent HIV-1 prevention in women is prophylaxis with anti-retroviral medications in breast fed (which is not recommended) children and milking mothers and during delivery (Coovadia, 2009).

The presented patient presents with thrush, moderate respiratory distress, asthenia and pulmonary infiltrates that all suggest diagnosis of unknown HIV-negativity and possible PCP pneumonia which was shown in BAL.

Since PCP is a dangerous disease, medical treatment in suspicious cases and diagnostic intervention for this and other AIDS defining illnesses as well as thrush continues to be prudent.

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Patient consent

Patient consent was obtained regarding use of

Table 1. Patient laboratory tests during this hospitalization.

Laboratory test	Patient values	Reference
WBC/MicroL	2.1-5.3*10 ³	4-10
Neut	81%	56
Lymph	16	34
Mono	2	4
Eos	1	2.7
Hgb g/dL	9.9	17.5-12.0
Hct	29.80%	54-36
MCV	85.9 fl	100-80
Plt/MicroL	230*10 ³	143-450
FBS mg/dl	117	70-110
BUNmg/d	81	5-25
Creat mg/dl	0.8	1.5-0.5
Liver Function Test	Within normal limits	
Wright Agglutination Test		
Widal	All negative	All negative
Coomb's Wright		
2ME		
VDRL	Negative	Negative
Anticardiolipin Gplu/ml	4.3	Less than 11
PH/PCO2/PO2/O2Sat/HCO3/BE	7.5/27.8/133.8/99.3/22.7/1.4	
NBT	99%	>95
Lupus Anticoagulant Qual	37	
Rheumatoid Factor	Negative	Negative
CRP mg/l	3	Adult<10
ESR mm/h	50	Male<20 Female<30
HBsAg	Negative	Negative
AntiHBS mlu/ml	1	Nonprot<10 Protective>100
AntiHCV	Nonreactive	Nonreactive
ASO Todd unit	200	Upto 250
Mono	Negative	Negative
ANCA-P	Negative	Upto 1/20
ANCA-C	Negative	Upto 1/20
FANA	Negative	Upto 1/40
Anti-ds DNA	Negative	Negative
CH50	88	
C3 mg/dl	0.954	0.89-1.87
C4 mg/dl	0.223	0.165-0.38

information in presenting the case for publication.

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