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Case Report

Bilateral Non Granulomatous Anterior Uveitis from Melioidosis

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Abstract

53 old female presented with fever with chills, multiple episodes of vomiting, shortness of breath and decreased urine output along with ocular complain of redness of both eyes since 2 days. Both eye episcleritis and non-granulomatous anterior uveitis was present. Sputum culture showed Burkholderia pseudomallei sensitive to Meropenem, co-trimazole and ciprofloxacin. Diagnosis of Melioidosis and patient was quickly switched to intravenous Meropenem and oral Sulfamethoxazole 800mg and trimethoprim 160 mg BD which was continued for next 10 days. Topical prednisolone acetate 1% was also prescribed which resolved the episcleritis and uveitis within next 10 days.

Keywords: *Uveitis; Melioidosis; B. pseudomallei*

Introduction

Melioidosis is a severe disease caused by the aerobic gram-negative nonspore-forming bacillus *B. pseudomallei*. The infection is acquired mainly through cutaneous inoculation, inhalation, and ingestion. Exposure to the environments containing the pathogen is vital for disease acquisition, but person-to-person transmission has rarely been reported [1,2]. Infection often presents with septicemia associated with distant organ dissemination and has emerged as an important cause of death in endemic regions over the past 25 years [3]. In the Northeastern part of Thailand, Melioidosis ranks as the third most frequent cause of death from infectious disease after HIV/AIDS and tuberculosis [4]. The incidence of ocular involvement is very rare and there are not many published case reports of ocular Melioidosis [5-8]. Melioidosis has been known to cause a spectrum of diseases in the eye. Corneal ulcers, endogenous endophthalmitis, orbital cellulitis and orbital apex syndrome are among a few [9-11]. Ocular melioidosis can present with any form of ocular tissue severe infection. Abscess formation of affected organs, including the eyes, are commonly found in melioidosis. Beside abscess formation and natural resistance to multiple classes of antibiotics, there is no other clinical manifestation that can be used as a suggestive finding of *B. pseudomallei*. The gold standard to diagnose Melioidosis is the isolation of the organism. Cultures of clinical samples from affected sites together with blood, urine, respiratory secretions, and throat swabs are recommended. Treatment regimen with initial parenteral therapy for at least 10 to 14 days followed by an oral eradication therapy for at least 12 to 20 weeks is recommended. Although the ocular manifestation of melioidosis is rare, in the endemic area, physicians should be aware of melioidosis as the cause of these ocular infections especially in patients with underlying diseases such as diabetes mellitus.

Case Report

53 old female presented with fever with chills, multiple episodes of vomiting, shortness of breath and decreased urine output since 2 days. Only ocular complain was redness of both eyes. The patient had presented in Medicine department for above mentioned complains where she was admitted to high definition unit for possible leptospirosis. All laboratory investigations were sent including blood culture and sensitivity. She was referred to ophthalmology for redness of eyes. The redness of eyes was associated with watering and photophobia. No marked diminution of vision, floaters or flashes of light was present. Maximum recorded temperature was 100°F. Systemic examination revealed lower respiratory tract infection with decreased breath sound and wheeze on lower lobe of left lung. Visual acuity at presentation was 6/24 on right eye and 6/12 on right eye. Her eyes were congested. Anterior

chamber showed grade 2+ cells, pupils were brisk on both eyes and anterior polar cataract was present on both eyes. Vitreous and retina were normal. She was admitted and treated with intravenous ceftriaxone and topical Prednisolone acetate 1% eyedrops every 4 hourly on both eyes. Investigations revealed hemoglobin 14.7 gm/dl, WBC: 11.7 x 10^3/µl (N 67% L 25% M 03%), ESR 35 mm/hr, TSH 16.6 µIU/ml, free t4 1.03 ng/dl, anti dsDNA 3.07U/ml, Urine RE: normal, Serology for HIV, hepatitis B and C and Leptospira were negative. Urea 14 mg/dl, creatinine 0.5 mg/dl, liver function tests were slightly deranged. Sputum culture showed *Burkholderia pseudomallei* sensitive to Meropenem, co-trimazole and ciprofloxacin. Diagnosis of Melioidosis and patient was quickly switched to intravenous Meropenem and oral Sulfamethoxazole 800 mg and trimethoprim 160 mg BD which was continued for next 10 days. The patient improved dramatically once specific treatment was started. Systemic signs wearied off whereas eyes showed decrease in congestion and quiet anterior chamber. Vision was 6/9 on both the eyes. With evident improvement, patient was discharged with tablet sulfamethoxazole 800mg and trimethoprim 160 mg BD to continue for 3 months and to taper eyedrop peracetate 1% every 7 days over 1 month. The patient is on regular follow up and no relapse has been seen.

Figure 1: Clinical picture of the part of bulbar conjunctiva with active inflamation and congestion.

Discussion

Melioidosis is a severe disease caused by the aerobic gram-negative nonspore-forming bacillus *B. pseudomallei*. In Nepal melioidosis is relatively an uncommon disease. First case of Melioidosis in Nepal was reported in 2005 in *Scandinavian Journal of Infectious Diseases* [12]. This was the report of the first recognized case of melioidosis in Nepal. Illness had begun 1 month after returning from Malaysia after a 1 year stay. The case highlights the importance of ascertaining the travel history in any patient with a suspected infectious disease in this age of global travel. Our case of Melioidosis with ocular features was first of its kind to present in our outpatient department. Since blood culture had been sent already the diagnosis of Melioidosis was not as difficult for us as it should have been. But this had taught particularly me as a learning resident how rare systemic diseases can affect eye and should always come to mind when no conclusive cause for ocular presentation has been found.

Conclusion

Melioidosis can cause a spectrum of diseases in the eye ranging from mild disease such as episcleritis and conjunctivitis to relatively vision threatening disease such as corneal ulcers, endogenous endophthalmitis orbital cellulitis and orbital apex syndrome. The above case is a little unusual for its presentation as anterior uveitis which is uncommon in Melioidosis. This case in my opinion is a classic example of the importance of through eye examination in systemic diseases and rightly stands by the phrase "Eye is the window of the body".

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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