JMSCR Vol||06||Issue||12||Page 241-244||December 2018

www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 79.54
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossrefDOI: https://dx.doi.org/10.18535/jmscr/v6i12.37

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Patient with Pulmonary and Extra-Pulmonary Tuberculosis' Involvement – A Case Report

Authors
Leonidas Grigorakos[1,2*], Sophia Simopoulou[3], Irene Tsovolou[2], Alexandros Tourtoglou[2] Giorgos Drivas[4], Anna Aiginitou[4], Vassilis Sgountzos[4]
[1]Faculty of Nursing, National and Kapodistrian University of Athens, Greece
[2]Intensive Care, "KAT" Trauma Hospital of Athens, Kifissia
[3]Peripheral Anticancer Oncology Hospital of Athens "Agios Savvas", Athens, Greece
[4]Sotiria Regional Chest Diseases Hospital, Athens, Greece
*Corresponding Author
Leonidas Grigorakos
2 Nikis St, 14561, Kifissia, Athens, Greece
Tel: +30.210.3709522, Fax: +30.210.3709520, Email: *grigorakos@parliament.gr*

Abstract
This case report describes a case of one patient with pulmonary, abdominal and ocular tuberculosis. The patient was transferred to our Special Unit of Respiratory Infections (SURI) from the emergency department, where he was admitted with cough, diarrhea, abdominal pain and fever. The abdominal ultrasound performed revealed hepatosplenomegaly and ascitic collection. After being subjected to laboratory tests, he was diagnosed with pulmonary, abdominal and ocular tuberculosis. He was immediately initiated specific antituberculosis treatment and supportive measures. After 40 days he was transferred from our unit to the Tuberculosis Department of our hospital to continue his therapy with considerable melioration of his clinical condition.
Keywords: *pulmonary tuberculosis, extra-pulmonary tuberculosis, retinal vasculitis, abdominal tuberculosis, ocular tuberculosis.*

Introduction

Tuberculosis (TB) assumes several clinical forms and can affect almost any part of the human body. Pulmonary TB, the most common and extended form of TB, although an ancient disease for which worldwide strategies have been applied to eradicate it, it still poses serious challenges to public health. At the same time, non pulmonary sites can be found in the lymph nodes, skeletal system, gastro-intestinal tract, central nervous system, skin and eye [1,2,3]. More so, diagnosis of extra-pulmonary TB is complicated due to the variety of presentations and multiple differential diagnoses that need to be excluded. We report a case of both pulmonary and extra pulmonary involvement of the disease in a patient, immigrant from a high prevalence country.

Case Presentation

An 18-year-old man from Pakistan was transferred to our SURI after being admitted to the emergency

department of our hospital because he had a 15-days cough, diarrhea, abdominal pain, fever and visual perturbations. The clinical examination and the abdominal ultrasound performed revealed hepatosplenomegaly and ascitic collection. Chest X-ray showed opacity in the right upper and middle pulmonary field and alveolar infiltrates in the upper left lobe. Due to his clinical picture and image findings, the patient was transferred to our SURI. The Mantoux tuberculin skin test performed revealed an in duration of 15 mm. Thus, a quadruple antitubercular therapy (INH, RIF, PZA, EMB), methylprednisolone and diuretics for his ascites collection were immediately initiated. Ziehl Neelsen stain of sputum smears was positive for acid fast organisms while the molecular method (Line Probe Assay) identified Mycobacterium TB complex resistant to INH. The ascitic collection was drained where about 2.7 lt of 52% polymorphonuclear exudate was aspirated with negative gram stain and cultures for common bacteria. Ziehl Neelsen stain for β-koch and cytological examination were negative. Ziehl Neelsen stain of gastric fluid was positive for β-koch. After one week, a thorax abdominal tomography was performed, where a large ascitic collection and splenomegaly with a diameter of 14.5 cm was observed. The ascitic collection was again punctured where approximately 3 liters were drained. Due to a picture of psoriasis, the patient was treated with benzyl benzoate, according to instructions given by a specialist in dermatology.

On the tenth day of hospitalization, the patient weighted 48 kg and was hemodynamically stable, afebrile, without respiratory failure, with soft belly, without sensitivity to palpability and with intestinal sounds present. On the thirteenth day of hospitalization, taking into consideration disease' s extention and after drug' s susceptibility testing results, INH was removed while two antibiotics were added (amikacin and moxifloxacin). Since then, the patient followed a five-fold treatment (RIF, PZA, EMB, amikacin and moxifloxacin). As the patient referred vision loss, an ophthalmologic assessment confirmed vision loss of the right eye. The funduscopic examination showed infiltration in the retinal area of the right eye and in the lower nasal branch. Visual acuity of the right eye was 5/10 while the left eye did not have any pathological findings. Magnetic resonance imaging of the head without IV contrast revealed no dissemination to the brain.

After 40 days' treatment the patient was transferred to continue his therapy to the Tuberculosis Department for follow-up and future therapy assessment, with vision improvement and considerable general melioration of his clinical condition.

Discussion

TB accounts for millions of cases of active disease and deaths worldwide. Its epidemiology has been modified by the introduction of effective chemotherapy, the HIV epidemic and immigration spreads[3,4]. Though more commonly infecting the pulmonary system, TB can also manifest as extra-pulmonary tuberculosis affecting the lymph nodes, gastrointestinal, skeletal, cardiac, genitourinary, and nervous systems and the eye. Diagnosis of these extra-pulmonary forms is difficult and is often determined by the exclusion of other conditions as some scholars report that it now constitutes a greater proportion of all patients with TB, especially in immunocompromised individuals and the elderly[5].

In our case report, we discuss a presentation of both pulmonary and extra pulmonary tuberculosis, characterized by abdominal and ocular involvement. The most common clinical presentation of ocular TB is posterior uveitis[6]. Other common ocular symptoms which have been noted include anterior uveitis, intermediate uveitis, retinitis, choroiditis, retinal vasculitis, optic neuropathy, neuroretinitis, endophthalmitis, and panophthalmitis[6]. The involvement of the optic nerve from TB can manifest as an optic nerve tubercle, papillitis, papilledema, optic neuritis, retrobulbar neuritis, neuroretinitis, or optochi-asmatic arachnoiditis[7].

Retinal vasculitis, which is more common with TB-associated intraocular inflammation than non-TB associated uveitis, typically presents as a

periphlebitis and very rarely involves the arterioles in intraocular TB[8,9]. Periphlebitis is typically accompanied by vitreitis and is the second most common presentation of intraocular TB[10]. In a patient with TB risk factors, TB should be highly suspected in the setting of exudative hemorrhagic periphlebitis[11]. Ischemic central retinal vein occlusion has also been reported in the setting of retinal vasculitis due to TB[12]. In this case report, our patient had vasculitis of the right eye without ischemic central retinal vein occlusion.

Ocular TB is not easy to diagnose because most of the time there is no concurrent active systemic TB. Notable in our findings was the unilateral presentation and the posterior segment lesions, concurring with the reports of some authors that ocular TB is usually unilateral and it affects posterior segments[13,14]. This would be a logical finding in our diagnosed patient since retinal vasculitis indicates hematogenous seeding of bacilli.

In conclusion, diagnosis and treatment of ocular TB and other types of extra-pulmonary TB in patients with active pulmonary TB should be targeted due to increased risk for illness and complications. More so, intraocular TB is a difficult diagnosis, as it can mimic many other more common etiologies of intraocular inflammation or uveitis. A high index of suspicion for TB and cooperation with infectious disease specialists are essential, because timely diagnosis and treatment may prevent irreversible vision loss[15].

Acknowledgment

No acknowledgment to declare.

References

1. Grigorakos L, Sgountzos V, Lazarescu D, Simopoulou S, Gkouni M, Markou N, Tamvakis V. Primary Thoracic Muscle Tuberculosis: Two Cases Reports, JMCR;2016;10:229.
2. Grigorakos L, Sgountzos V, Simopoulou S, Lazarescu D, Mavropanou D, Georgiadou A, Tamvakis V. Psoas Muscle Tuberculosis in Greece: Report of Two Cases, Chest Disease Reports, 2017, 5:5777.
3. Grigorakos L, Lazarescu D, Lintzeri D, Simopoulou S, Aiginitou A, Christakakou A, Sgountzos V. Extra pulmonary tuberculosis. An overview of five cases. Journal of Medical Science and Clinical Research, 2018, 6(4): 943-947.
4. Fontanilla JM, Barnes A, von Reyn CF. Current diagnosis and management of peripheral tuberculous lymphadenitis. Clin Infect Dis 2011;53:555–562.
5. Lee JY. Diagnosis and treatment of extrapulmonary tuberculosis. Tuberc Respir Dis (Seoul) 2015;78(2):47-55.
6. Bouza E, Merino P, Munoz P. Ocular tuberculosis. A prospective study in a general hospital. Medicine 1997;76:53–61.
7. Gupta V, Gupta A, Rao NA. Intraocular tuberculosis— an update. Survey of Ophthalmology 2007;52(6):561–587.
8. Gupta A, Bansal R, Gupta V, Sharma A, Bambery P. Ocular signs predictive of tubercular uveitis. Am J Ophthalmol 2010;149:562-570.
9. Chan HS, Pang J. Vasculitis in tuberculous infection. Chest 1990;98:511.
10. Gupta A, Gupta V, Arora S, Dogra MR, Bambery P. PCR-positive tubercular retinal vasculitis: clinical characteristics and management. Retina 2001;21:435-444.
11. Dalvin LA, Smith WM. Intraocular manifestations of mycobacterium tuberculosis: A review of the literature. Journal of Clinical Tuberculosis and Other Mycobacterial Diseases 2017;7:13-21.
12. E. Yuksel, S. Ozdek. Unusual presentation of ocular tuberculosis: multiple chorioretinitis, retinal vasculitis and ischaemic central retinal vein occlusion. Clin Exp Optom, 2013;96 (4):428-429.
13. Sahu GN, Mishra N, Bhutia RC, Mohanty AB: Manifestations in ocular tuberculosis. Ind J Tub 1998;45:153.

14. Abu El-Asrar AM, Abbouammo M, Al-Mezaine H. Tuberculous uveitis. Middle East Afr J Ophthalmol 2009;16(4):188–201.
15. Thompson MJ, Albert DM. Ocular tuberculosis. Arch Ophthalmol 2005;123:844-849.