

Case Report

CHOROID TUBERCLE IN MILLIARY TUBERCULOSIS-A CASE REPORT

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ABSTRACT

Milliary tuberculosis is a potentially lethal form of tuberculosis. It results from massive hematogenous dissemination of Mycobacterium tuberculosis bacilli and it accounts for less than 2% of all cases of tuberculosis in immunocompetent persons. Diagnosing milliary tuberculosis is a challenge because of its non specific clinical manifestations. Choroid tubercle, one of the pathognomonic feature of milliary tuberculosis can be detected easily in the early course of illness by careful fundus examination. This can help in early initiation of therapy and preventing fatal complications.

Keywords: Milliary Tuberculosis, Choroid Tubercle, Antitubercular Therapy

INTRODUCTION

Tuberculosis (TB) infection is a leading cause of preventable morbidity and mortality worldwide. Milliary tuberculosis is one of the variant of disseminated tuberculosis and it is characterised by millet seed-sized (1-2 mm) granulomas in various organs. It result from massive haematogenous spread of Mycobacterium Tuberculosis. Diagnosis of milliary tuberculosis is not straight forward because of its non specific clinical manifestations and it is also difficult in establishing TB as etiological diagnosis in this case as sputum smear microscopy is usually negative in 80% of cases. If it goes unrecognised, milliary tuberculosis is a lethal condition. However with proper early treatment, it is amenable to cure. Choroid tubercle, often associated with milliary tuberculosis with or without meningitis, is considered pathognomonic of milliary tuberculosis. Choroid tubercle is easily accessible and appear early in the course of illness. The purpose of presentation of this case report is to give stress on presence of choroid tubercle that gives a clue to physician to decide for early diagnosis of milliary tuberculosis.

CASES

24 year old female was admitted with complaints of low grade fever, weight loss, decreased appetite and generalised weakness for 1 month.

There was no family history of tuberculosis or any history of major illness in past. On admission patient looked ill, emaciated but she was conscious and oriented. On examination, she was febrile, had pallor, cervical lymphadenopathy, tachycardia (pulse rate 126/min), low blood pressure (80/60 mm Hg) and tachypnoeic (respiratory rate 26/min).

Examination of chest showed impaired percussion note at right basal region and below the angle of left scapula. There was fine inspiratory crepitations over base of the chest bilaterally. Abdomen was distended with a doughy feel. There was tender hepatomegaly with shifting dullness. There was no signs of meningeal irritation.

Investigations revealed Hb 9.1 gm/dl, ESR 53 mm/1st hr, Mantoux test was positive within duration of 14 mm and sputum for AFB was negative. Routine urine and blood biochemistry investigations were normal. Blood for widal test, peripheral blood smear for malaria parasite, scrub typhus antigen, urine and blood culture, HIV and Hepatitis B and C serology were negative. Chest X-Ray showed typical pattern of milliary mottling suggestive of milliary tuberculosis (Figure 1).

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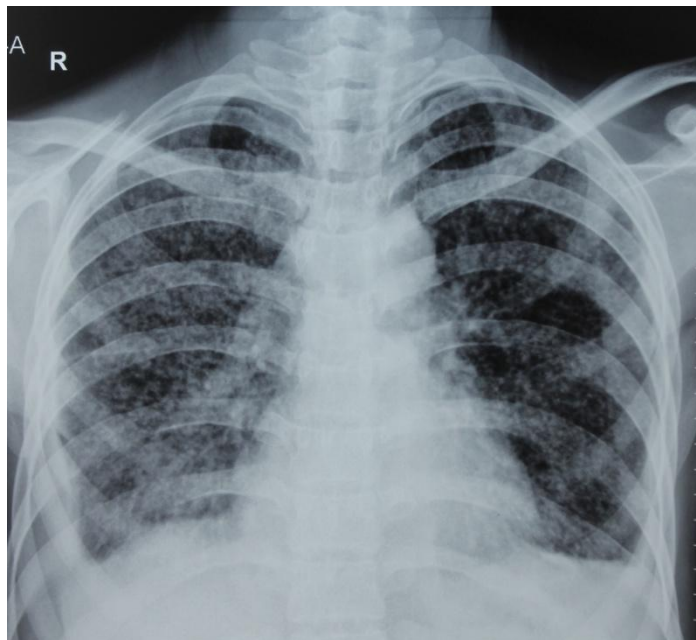


Figure 1: X ray of the chest showing miliary mottling suggestive of miliary tuberculosis

Sonography abdomen revealed hepatomegaly, ascitis, abdominal lymphadenopathy with minimal right sided pleural effusion. Ascitic fluid analysis showed an exudative fluid (SAAG 0.5) with high cell count(1000/cmm) with lymphocyte predominance (polymorphs 13% and lymphocytes 87%)with high Adenosine deaminase level (106 U/l). Fundoscopic examination by the ophtalmologist revealed presence of well defined lesion behind retina in the superonasal quadrant extending into the optic disc in left eye (Figure 2).



Figure 2: Fundoscopy showing well defined lesion behind retina in the superonasal quadrant extending into the optic disc in left eye

Also it revealed multiple ill defined lesion in the right eye below the retina in the superotemporal quadrant not extending to optic disc suggestive of choroid tubercle (Figure 3).

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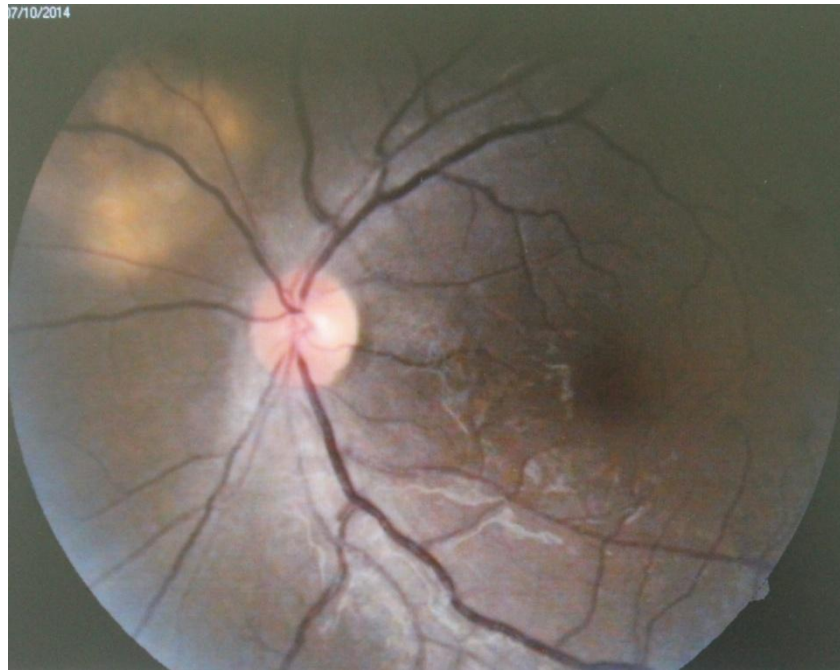


Figure 3: Fundoscopy showing multiple ill defined lesion in the right eye below the retina in the superotemporal quadrant not extending to optic disc

After the final diagnosis of miliary TB, the patient was given antituberculous therapy with initial support of intravenous fluid and Hydrocortisone. Patient responded well to treatment and was discharged with an advice to continue antitubercular therapy with tapering doses of oral steroid.

DISCUSSION

Despite being almost 100% curable, Tuberculosis still remains a major public health problem and represents the second most common cause of death from infectious diseases globally (Thomas *et al.*, 2014). India has about one quarter of global burden of tuberculosis. Although tuberculosis is very common in India, miliary tuberculosis as one form of disseminated tuberculosis is not seen commonly. It has been estimated that miliary tuberculosis accounts for about less than 2% of all cases of TB in immunocompetent persons and up to 20% of all extrapulmonary cases of TB (Sharma *et al.*, 2009). Miliary tuberculosis results from massive hematogenous dissemination of *Mycobacterium tuberculosis* bacilli. It was originally described by John Jacob Manget in seventeenth century. He linked the pathological appearance of small white nodules of the lung to millet seed sized (1-2mm) granulomas (Ray *et al.*, 2013). Later on, the term miliary TB was used to describe radiological appearance of miliary mottling in patients with disseminated TB. Although classical miliary TB is usually easily diagnosed in patients with miliary mottling on chest X-Ray, choroidal tubercle and positive tuberculin skin test; but many a time diagnosis is not straight forward as the clinical symptoms are non specific. Classical miliary mottling is not always revealed by chest radiograph, and atypical presentations are commonly encountered. If it goes unrecognised, miliary TB has a high mortality (18-30%) (Ray *et al.*, 2013). With proper early treatment, however, it is amenable to cure with proper intervention. Choroid tubercle was first described by Gueneau de Mussy in 1830. It is one of the most common manifestation of intraocular TB, frequently associated with miliary TB with or without meningitis (Illingworth *et al.*, 1948). It appears as a rounded gray white or yellowish lesions, often multiple in numbers, may occur in one or both eyes. The incidence of choroid tubercle in miliary TB varies from 12.8% to 73.3% depending on whether they are present in isolated tubercular meningitis, miliary TB or combination of both (Illingworth *et al.*, 1956). The choroid tubercle often appears early in the course of illness and the small tubercle often disappears completely (Rodin *et al.*, 1928). It is too easy to miss the choroid tubercle, even on repeated examinations. If present,

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choroidal tubercles are pathognomonic of milliary TB. Therefore, a systemic repeated ophthalmoscopic examination after mydriatic administration is recommended in all patients with suspected milliary TB.

Conclusion

Milliary tuberculosis is a potentially lethal form of tuberculosis often goes unrecognised because of its non specific clinical symptoms. Detection of choroidal tubercle by careful fundus examination can offer a valuable clue to the diagnosis of milliary tuberculosis and thus helps in early initiation of therapy in critically ill patients.

REFERENCES

- Thomas FR, Karen BF and Anthony HD (2014).** Global Tuberculosis Perspectives, Prospects, and Priorities. *JAMA* **312**(14) 1393-1394.
- Sharma SK and Mohan A (2009).** Disseminated and miliary tuberculosis. In: *Tuberculosis, 2nd edition*, edited by Sharma SK and Mohan A (Jaypee Brothers) New Delhi 493-518.
- Ray S, Talukdar A, Kundu S, Khanra D and Sonthalia N (2013).** Diagnosis and management of milliary tuberculosis: current status and future perspective. *Therapeutic and Clinical Risk Management* **9** 9-26.
- Illingworth RS and Wright T (1948).** Tubercles of the choroid. *BMJ* 4572.
- Illingworth RS and Lorber J (1956).** Tubercles of the choroid. *Archives of Disease in Childhood* **31** 467-9.
- Rodin FH and Dickey LB (1928).** Tubercle of the choroid in milliary tuberculosis: case report. *California and Western Medicine* **28**(6) 807-809.