

Miliary Tuberculosis: an Accidental Finding at Autopsy

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ABSTRACT

Background: Forensic pathologists often encounter various disease conditions at autopsy which would not have been diagnosed ante-mortem and they often explain poor clinical outcomes in some patient.

Case Report: The following is a case report of a 55-years old female who died of complications of degloving injury to the right lower limb.

Conclusion: Miliary Tuberculosis was an accidental finding at autopsy and thus explained the deteriorating condition of patient and failure to respond to the treatment.

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► *Implication for health policy/practice/research/medical education:* Miliary Tuberculosis

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1. Introduction:

Forensic pathologists often encounter various disease conditions at autopsies (1). More often than not these diseases would not have been diagnosed ante-mortem (1). Thus the discovery of the underlying pathological condition at autopsy usually strengthens our databases regarding the prevalence of several diseases. In many cases this underlying pathology acts as a complicating factor when the patient is under treatment for a different ailment. Though the pathological condition is not necessarily involved as

being the cause of death, its role as a contributory factor cannot be ignored.

The following case report is of a 55 year old female who died as a complication degloving injury of the right lower limb sustained in road traffic accident, and miliary tuberculosis happened to be an accidental finding at post mortem. What would have been an easy road to recovery from the injury for the patient, remained as a condition with poor prognosis.

2. Case Report:

A 55-year old female was brought for autopsy after she succumbed to her injuries which she sustained in a road traffic accident. She was treated at a tertiary care center for degloving injury of right lower limb by wound debridement. Post operatively complications ensued in the form of septic shock, septic encephalopathy and

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hemorrhagic shock. The patient was declared dead following a cardiac arrest.

External examination

The body was that of an adult female, moderately built and poorly nourished 149cm in length and weighing 44kg with pale mucous membranes. A surgically debrided degloving injury of the right thigh and leg was present.

Internal findings

The pleural cavity of the deceased contained 300 ml and 400 ml of straw colored fluid on right and left side respectively. Both the lungs were adherent to the chest wall and cut section oozed out white mucoïd fluid. Peritoneum contained 900 ml of straw colored fluid with thin mesentery seeded with multiple white nodules measuring 0.2cm×0.2cm. Multiple nodules were present along the length of small intestine including a thickened mass at the ileo-caecal junction (Figure 1). Kidneys showed cystic lesions which contained greyish white pultaceous material on cut section (Figure 2). Uterus with adnexa showed multiple white nodules measuring 0.2cm×0.2cm on cut section. Lungs, small intestine with mesentery, kidneys and uterus with adnexa were sent for histopathological analysis.

Histopathology report

Lungs, small intestine with mesentery, kidneys and uterus with adnexa were sent for histopathological examination showed features of tuberculosis with granulomas, caseation necrosis, tubercular lymphadenitis and multinucleated langhan's type of giant cells (Figure 3). Cause of death was opined to be complications of crush injury.

3. Discussion:

Tuberculosis is a notifiable infectious disease in India. This disease has an estimated mortality rate of 19 per 1 lakh population (2). It is a chronic granulomatous disease caused by acid fast bacilli; *Mycobacterium tuberculosis*. This lethal disease distinguishes itself in many a lethal forms; one of them being miliary tuberculosis. Miliary tuberculosis is due to lymphohaematogenous spread of tuberculosis infection from primary focus (1, 3). Several terms like haematogenous,



Fig. 1. Picture is showing miliary seeding of the mesentery.



Fig. 2. Picture is showing cut section of kidney showing white mucoïd material.

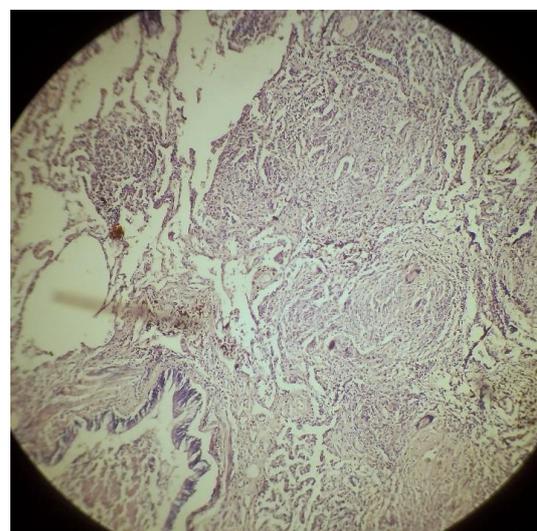


Fig. 3. Histopathological examination of lung showed features of tuberculosis with granulomas, caseation necrosis, and multinucleated langhan's type of giant cells (H and E ×400).

generalised, disseminated tuberculosis have been used to describe this entity. The name miliary tuberculosis was derived from the

latin word *miliarius*, meaning related to millet seed to describe the resemblance of gross pathological findings to that of innumerable millet seeds in size and appearance (4). It results from erosion of mycobacteria laden inflammatory foci into blood vessels with subsequent showering of bacilli into blood stream and seeding into non-pulmonary sites (4). At autopsy the pathognomonic tubercles are usually seen in organs of high blood flow like spleen, liver, lungs, kidneys and bone marrow (4). In the present case these lesions were noticed in lungs, mesentery, intestine, kidneys and uterus.

The classical presenting features of this disease are non-specific and include evening rise of temperature, chills, night sweats and weight loss. Predisposing factors for the development of this condition include advanced age, immunosuppression in cases of HIV, chronic renal failure, organ transplantation or corticosteroid therapy (4-8). The medical records and the history elicited in this case showed that the patient was apparently healthy and had no risk factors to develop this condition. The hospital records of the patient showed that she tested negative for HIV. A lesser encountered manifestation of this disease in the form of sudden death also finds a mention in literature and case reports (1, 3, 9, 10).

Diagnosis of this condition is generally made through the varied presenting symptoms which arouses high degree of suspicion towards a differential diagnosis of Miliary Tuberculosis. The present case however showed no symptoms of having the infection. The laboratory parameters usually show normochromic anaemia, elevated Erythrocyte sedimentation rate, leukopenia or leucocytosis and hyponatremia (4, 11). The present case had anaemia but it was attributed to the blood loss and failed to raise any suspicion. The patient's electrolyte and white blood cell counts were within normal limits. Classical appearance of miliary tuberculosis on chest radiograph is reticulonodular infiltrate distributed fairly throughout the lung. A miliary pattern on chest radiograph is not required for diagnosis

confirmation, as approximately fifty percent of patients with a confirmed diagnosis of disseminated TB have a normal chest radiographs. However High resolution CT scan (HRCT) of the chest is more sensitive for Miliary Tuberculosis than plain chest radiography and has improved the diagnosis (4, 11). Contrast-enhanced CT scans and magnetic resonance imaging (MRI) are useful in identifying miliary lesions at extra pulmonary sites (7). The present case had a normal looking chest x ray and HRCT was not done as nobody had suspected Miliary Tuberculosis.

4. Conclusion:

In the present case, the diagnosis of Miliary tuberculosis at autopsy explained why the patient failed to make a recovery despite the best care and treatment provided. Thus, this case emphasized the fact that accidental findings encountered during medicolegal and pathological autopsies provides have better understanding of the poor clinical outcomes in some cases.

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