

# A case report of tuberculosis in a captive Sloth Bear (*Melursus ursinus*)

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## Introduction

Tuberculosis (TB) is a one of the important chronic infectious disease caused by acid fast bacilli of the genus mycobacterium, has a wide host range which includes elephants, llamas, deer, urial, tapiers, antelope, sheep, binturongs, lesser pandas (Liston & Soparkar, 1924), giraffe, wild sheep, mouse deer (sen gupta, 1974), blackbuck, sambar, chital, gaur (Rao, 1989), barking deer, hog deer, mithun and nilgai (Fox,1923). Besides this it is found affecting carnivores, primates, perissodactylids, marsupials, rodents, amphibians (Arora, 1994) and birds (Lesser whistling teal and pigeon) in captivity (Rao *et al.*, 1982).

## Methodology

A carcass of 23 year old female Sloth Bear (*Melursus ursinus*) from Kamala Nehru Zoological Garden, Ahmedabad was brought for a post mortem examination at Department of Veterinary Pathology, Veterinary College, Anand Agricultural University, Anand with history of illness since one month and no response to treatment. Impression smear was prepared from caseative nodules from mesenteric lymph node and stained by ziehl neelson for demonstration of acid fast bacilli. All affected organs were collected for detailed histopathological examination. Routine paraffin embedded tissue section were examined after H.E staining.

## Results and Discussion

The postmortem examination revealed pale and icteric visible mucous membranes as well as yellowish subcutaneous tissues with huge amount of ascitic fluid in the abdominal cavity. Both the lungs revealed presence of large numbers of caseative nodules of various sizes. The peritoneal surface of diaphragm, peritoneum and spleen showed numerous caseative nodules. A cocconut size caseative mass was found in one of the mesentric lymph node.

Mehrotra *et al.*, (1999) have reported micro and macro abscess throughout viscera in a sloth bear that died at Jaipur zoo. Sreeniwass Gowda *et al.* (1983) also reported tuberculosis in sloth bear with similar lesions on

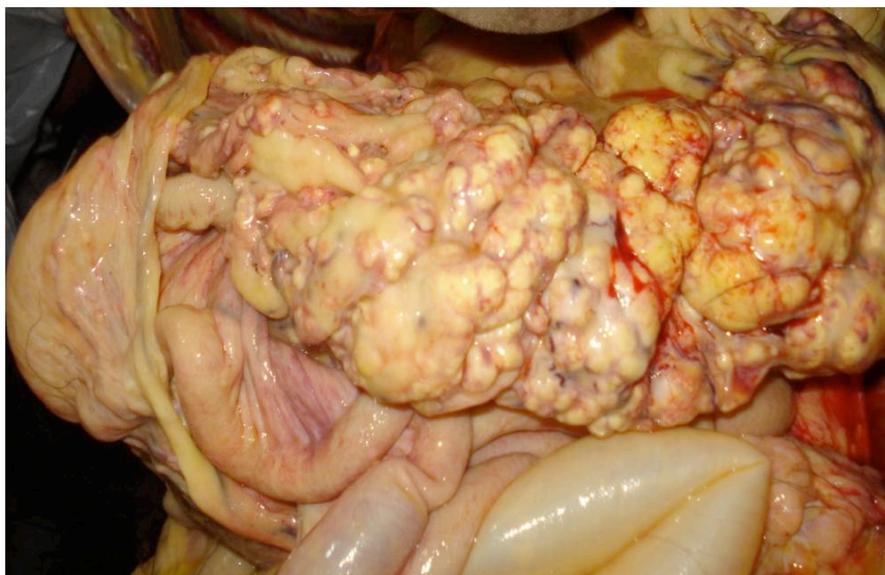


Fig 1. Microabscesses in throughout mesentery cord

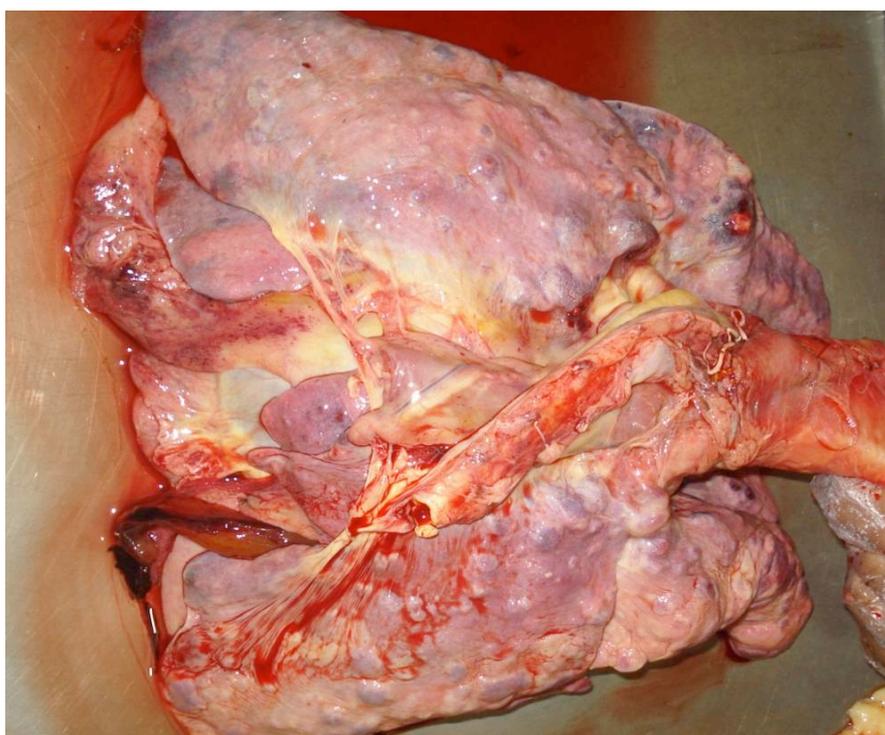


Fig 2. Tuberculous nodules in lung parenchyma

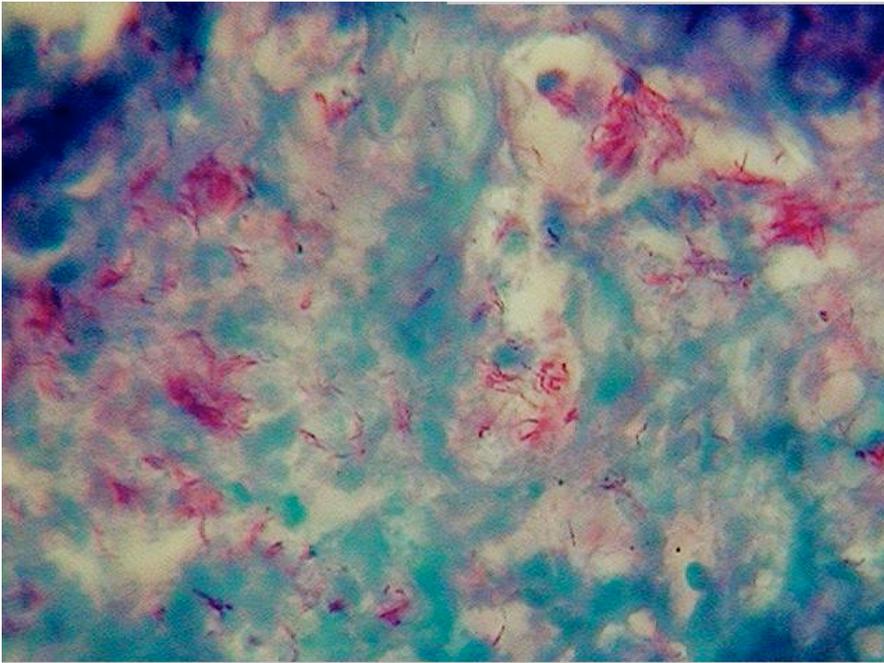
various visceral organs. Liver was icteric and cirrhotic in nature. The impression smears prepared from the caseative nodules and paraffin section showed abundant presence of short stumpy acid fast tubercular bacilli that resemble *Mycobacterium tuberculosis*. Histopathological examination of various affected organs revealed presence of granulomatous nodules characterized by caseative necrosis along with infiltration of chronic

inflammatory cells. Bhat *et al.*, (2005) also reported a case of tuberculosis in a sloth bear with similar findings.

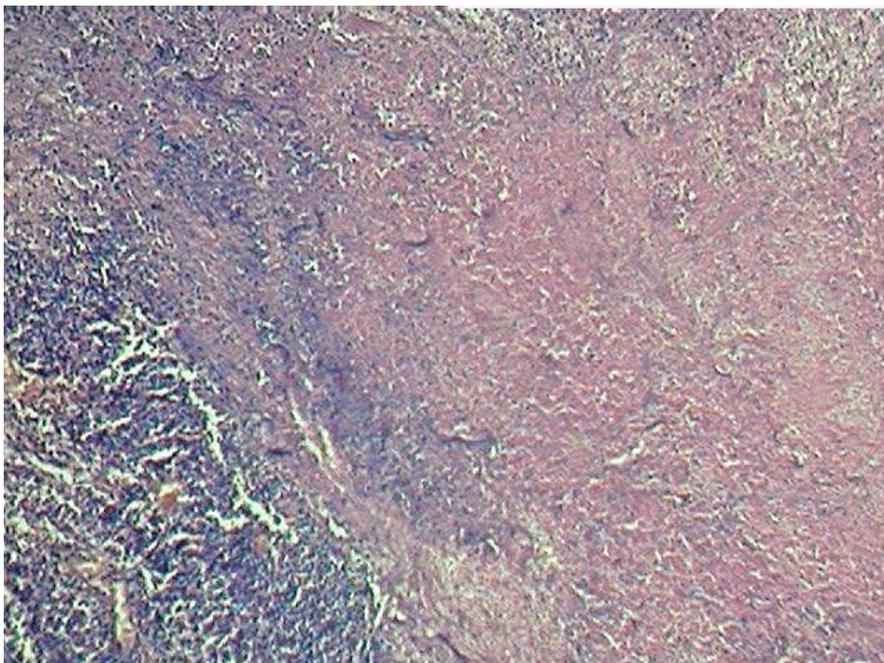
## Conclusion

Diseases play a significant role in determining demography of all living

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**Fig 3: Presence of adudant acid fast bacilli in Impression smear from tubercle.**



**Fig 4: Presence of caseative necrosis surrounded by chronic inflammatory cells and fibrosis**

beings. From the conservation perspective, infectious diseases play a major role in determining the persistence, distribution, and abundance of wild populations in their natural ecosystems and tuberculosis is one of ancient infectious disease causing high morbidity and mortality in wild fauna. There is easy and high frequency of spread of organism from animals to human leads more zoonotic importance. With this aspect there is urgent need to detect or identify the

affected animals by modern molecular diagnostic techniques.

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