TUBERCULOSIS IN SLOTH BEAR AT JAIPUR ZOO

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Tuberculosis a chronic infectious disease of domestic animals, is of great public health and economic significance. The causal agent *Mycobacterium spp.* invariably infects man and animal hosts without manifesting clinically but during conditions of stress, the infection gets manifested as disease. It has been observed that the incidences of this chronic disease is comparatively higher in captivity than in free living animals. Close confinement, overcrowding, hot and humid living conditions enhance the possibility of infection.

Occasionally, animals suffering from tuberculosis infection fail to show clinical symptoms. Such cases pose more threat to public health. In recent past the apex centre received two carcasses of Sloth Bear. One animal was old, aging more than 16 years and another was young, aging about 8-10 years. Both animals were under treatment in Jaipur Zoo for respiratory infections, with symptoms of high fever, nasal discharge and coughing. Due to progressive secondary infections, the health condition of both animals deteriorated and death occurred due to possible secondary bacterial infections. Postmortem examination revealed generalized lesions characterized by the presence of micro and macro abscesses throughout the viscera. Midline incision revealed the presence of white patches of variable size throughout the visceral organs predominantly in spleen, liver, kidney, intestinal wall and genital organs. There was accumulation of white turbid fluid, about 250 ml in case I and 400 ml in case II in thoracic cavity. There were patchy circular lesions throughout the lung. Lungs were hard, shrunkened and showed compensatory enlargement in apparently healthy part in both cases.

The impression smears from white patches (Micro and macro abscessess) prepared from different organs revealed the presence of Gram +ve rods, non sporulated, comma shaped with pallisade arrangement. Simultaneously, smears were also stained by Ziehl-Neelsons (ZN) staining method to demonstrate the presence of acid fast organisms.

The microscopic examination of these smears revealed the presence of abundant small stumpy acid fast rods embeded in pus cells and debris. No attempts were made to culture the acid fast Mycobacteria, whereas the pus samples were also inoculated in blood agar medium for isolation of aerobic bacteria. The bacterial growth so obtained following incubation and purification was identified as *Corynebacterium pyogens* as per Carter's (1967) technique.

Looking at the symptoms, lesions and laboratory findings, it was concluded that both animals initially suffered from tuberculosis. Sreenivas Gowda *et al.* (1983) also reported tuberculosis in Sloth Bear with similar lesions on various visceral organs. Low body resistance might have lead to secondary bacterial (*C. pyogens*) infection which ultimately proved fatal. A regular thorough physical and laboratory examination of suspected individuals is essential for early diagnosis and isolation. The lesions found in various organs as identified in postmortems in sloth bear as suggestive of the fact that the death occurred due to mixed infection of Mycobacteria and *Corynebacterium pyogens*.

References

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