PASTEURELLOSIS IN A HERD OF SPOTTED DEER (*AXIS AXIS*)

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Pasteurellosis, an infectious bacterial disease has been reported in many wild animals including several species of deer (Chakarborty *et al.*, 1995). This communication deals with the occurrence of the disease in a herd of Spotted Deer (*Axis axis*).

Two outbreaks suggestive of pasteurellosis occurred in a captive herd of Spotted Deer in the Deer Park attached to Tripunithura Hill Palace in Ernakulam District, Kerala. They were enclosed in close proximity to a herd of 17 Sambar Deer (*Cervus unicolor*) in adjacent enclosures, separated by a wire fence. There was no direct contact between these two groups of animals. None of the animals were vaccinated against pasteurellosis. The first outbreak occurred in August 2001 in which out of the 99 Spotted Deer in the herd, 60 (60.1%) were affected. The disease started with signs such as anorexia and frothy nasal discharge, respiratory distress, oedema of intermandibular space and lameness. Constipation, blood-mixed exudate from the anus and recumbency were noticed during the terminal stages of the illness. The animals were treated with sulphadimidine @ 100mg/kg body weight orally for five days. The mortality rate decreased during the course of therapy but increased again when the drug was discontinued. This increase in mortality rate may be due to the fact that the disease may not have been cured completely or it may be due to reinfection. During this outbreak, out of the 60 animals affected, 25 died. Though the Sambar Deer were also affected, mortality was not noticed in them.

During post-mortem examination, serosanguinous exudate in the trachea, froth in the bronchi, congestion and consolidation of lungs, petecheal haemorrhages in the epicardium and intestinal mucosa and necrotic foci in the liver were noticed. *Pasteurella multocida* was isolated in pure culture from heart blood, liver and spleen collected from the dead animals. The isolate was pathogenic to mice and sensitive to ciprofloxacin, tetracyclin, chloramphenicol, ampicillin and streptomycin and resistant to cotrimoxazole.

The next outbreak occurred in April 2002 in which 40 (47.1%) out of 85 Spotted Deer were affected and six died. Clinical signs and post-mortem findings were similar to those observed during the first outbreak. But in this outbreak, abortion was also noticed. *Pasteurella multocida* was isolated in pure culture from liver, spleen and heart blood collected from the dead animals. This isolate also, like the one isolated from the first outbreak, was pathogenic to mice. Further, on biotyping of the isolate as described by Mutters *et al.* (1985), the isolate was found to be *Pasteurella multocida* subsp. *multocida* and was sensitive to enrofloxacin, pefloxacin, chloramphenicol, tetracycline and ampicillin and resistant to streptomycin and gentamicin.

Pasteurellosis in Spotted Deer in Tamil Nadu have been reported by Damodaran *et al*. (1977) and Srinivasan *et al*. (1977). Chakarborty *et al.* (1995) isolated *Pasteurella multocida* from two Spotted Deer that had died of pnuemonia in Assam State Zoo. Dhoot and Upadhye (2001) reported pasteurellosis as the cause of death of a Spotted Deer in Maharajbag Zoo in Nagpur. It may be concluded that pasteurellosis is one of the important causes of mortality in Spotted Deer reared in captivity.

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