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ELECTROCARDIOGRAPHIC ABNORMALITIES IN GOATS UNDER XYLAZINE OR DETOMIDINE KETAMINE ANAESTHESIA

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Alpha-2-adrenereceptor agonist agents, when used alone, produce ECG abnormalities like premature ventricular contraction (Clark *et al.*, 1982) and varying degree of A.V. block (Haskins *et al.*, 1986). However, these abnormalities can be moderated by using atropine premedication and by combining with ketamine. This paper reports ECG abnormalities in atropine-detomidine premedicated and ketamine anaesthetized goats.

Materials and methods

The study was conducted on 12 clinically healthy adult goats of both sexes, weighing 15-20kg. The animals were dewormed with fenbendazole @5 mg/kg orally about one month prior to the experiment and then divided into 2 groups of six animals each. In group I, after atropinization (0.06 mg/kg s/c), detomidine (Domosedan - Formos Group Ltd., Turku, Finland) was administered intramuscularly @ 0.22 mg/kg body weight. It was followed 10 minute later by ketamine @ 11.0 mg/kg body weight intramuscularly. In group II animals xylazine (0.22 mg/kg I.M.) was administered instead of detomidine with the rest of the anaesthetic regimen as in group I.

ECG was recorded in right lateral recumbency with the help of Cardiart 308 (BPL India Ltd., India) as per method described by Tilley (1985). ECG recordings were taken just before administration of drugs and at 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 120, 150 and 180 minutes after ketamine administration in both the groups.

Results and discussion

There was no ECG abnormality in the animals where atropine xylazine-ketamine combination was administered. Whereas, in atropine detomidine-ketamine administered animals one animal showed ECG abnormality viz., ventricular trigeminy (Fig. 1) for every two normal heart beat there was one premature ventricular beat.

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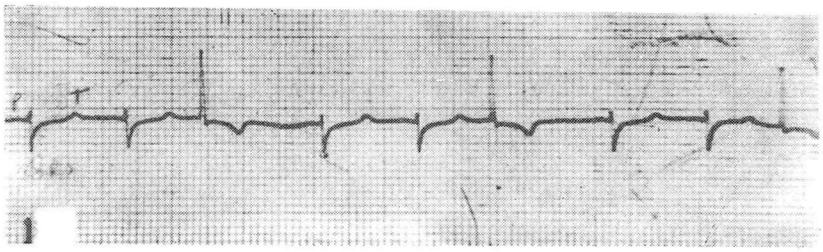

Xylazine or detomidine when used alone produce ECG abnormalities (Fisher, 1986). These abnormalities can be moderated by combining with drugs like atropine (Kumar and Thurmon, 1979) and ketamine (Kumar *et al.*, 1979). In the present study atropine and ketamine were able to moderate the ill effects of xylazine completely. However, these drugs failed to moderate arrythymogenic effects of detomidine, indicating that the arrythymogenic effect of detomidine is not always corrected by atropinisation confirming the findings of Dyson *et al.* (1987).

Summary

Detomidine produced ventricular trigeminy in atropine premedicated and ketamine anaesthtized goats, whereas, the effect of xylazine could be prevented by atropinisation.

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