

LETTER TO THE EDITOR

CAPTURE MYOPATHY AND ANAESTHESIA OF THE LESSER MOUSEDEER (*TRAGULUS JAVANICUS*)

SIR: Whilst not documented, many experienced people who have had varying associations with mousedeer have the impression that mousedeer other than being extremely timid animals are also prone to 'dropping dead' and are virtually impossible to anaesthetise. Capture myopathy often resulting in death has been reported to occur frequently in ungulates (Basson and Hofmeyr, 1973). It has been reported in many species of Artiodactyla, particularly from Africa and North America (Jarrett and Murray, 1967; Lewis *et al.*, 1977). To a lesser extent, the condition has been reported in the Perissodactyla (Harthoorn and Young, 1974) and in the Macropodidae (Munday, 1972). In the early 1970s, the Institute of Medical Research (I.M.R.) established a large breeding colony of Malaysian Lesser Mousedeer (*Tragulus javanicus*). They found that many of their animals when stressed went into a state of shock which had a rapid onset and short duration with severe hypoadrenocorticism and hypoglycaemia. They found that calcium gluconate coupled with prednisolone reduced the stress related syndrome (Anon., 1971). Even so Nowak and Paradiso (1983) reported that mousedeer can be readily tamed and make good pets. The discrepancy between these findings may be answered by a number of factors. To date there is no indication of the age and sex of those dying from stress in the I.M.R. experience. It is quite possible that the answer lies in seasonal changes to the ratio of bound to free adrenocorticosteroids. Thus as testicular steroids rise towards and during the mating season, catabolic processes and concomitant lymphopenia could result in males being more likely to succumb to stress. Under this scenario females should be little affected. These may be the easily tamed animals reported by Nowak and Paradiso (1983).

In our experience, induction of anaesthesia was found to be simple. Eight animals weighing from 1.2 kg to 1.8 kg were given different levels of ketamine hydrochloride (Ketalar; Parke Davis) and xylazine (Rompun; Bayer). Ketamine levels ranged from 25-45 mg/kg and Rompun from 3-5 mg/kg. Both drugs were administered together, in divided doses, into the biceps femoris muscle. The higher doses were needed to cause adequate restraint with most animals being in lateral recumbency within four minutes, having a reduced palpebral reflex in seven minutes and a lowered jaw muscle tone between six and 10 minutes. This level of deep tranquillization was suitable for examination of the animal and minor surgical procedures. Pain still registered so local anaesthesia would be necessary for any pain-causing procedures. At this level of tranquillization the respiration of the animals was quite variable. Those more deeply tranquillized had 10-15 breaths each of 4-5 shallow inhalations per minute. Some animals, a little less deeply tranquillized, had rapid shallow breaths up to 110 per minute. At no stage was surgical anaesthesia reached with the above dosages but the animals were adequately tranquillized to allow endotracheal intubation within 5-10 minutes of drug administration. To routinely do this, atropine sulphate was administered intramuscularly to reduce salivation to an acceptable level. The mousedeer has a relatively wide gape and a broad though deep oral cavity which readily allowed the laryngoscopic visualization of the epiglottis and rima glottis. Incubation was done using a non-cuffed endotracheal tube (range 3.5-4.5) stiffened by a stilette. The animals were maintained on 2% halothane delivered with oxygen at 2ℓ per minute using an Ayres T-piece nonrebreathing anaesthetic circuit attached to an anaesthetic machine (Midget; ICI) (Richardson K.C. and Cullen, L.K. 1981).

Recovery from anaesthesia was uneventful. Animals were generally standing chewing their cud and eructating within two and a half hours of the anaesthetic procedure.

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