

Efficacy of Xylazine as a Sedative in Cattle

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Abstract

Xylazine was given in six clinical cases @ 0.03 mg/kg body weight by intramuscular route, 15 minutes before the actual surgical intervention. The local anaesthetic, Lignocaine HCL 2% was given in all the cases for the desensitization of site of operation. The Clinical parameters were studied before and after 10, 15, 30 and 60 minutes of xylazine sedation. The heart rate was reduced from 67.83 ± 3.90 to 59.5 ± 3.82 per minute. The respiration rate was decreased from 29.16 ± 0.61 to 29.10 ± 1.00 per minute. The rectal temperature was reduced from 101.6 ± 0.03 to 101.5 ± 0.06 °F. Sedative effect was found to be good without any untoward reaction.

Keywords: Efficacy, Xylazine, Sedation, Cattle, Clinical Parameters, Respiration rate, Heart rate, Rectal temperature.

Introduction

Xylazine an alpha-2 blocker widely used in various species of animals. It is most potent non-narcotic sedative and analgesic as well as muscular relaxant. It has wide margin of safety. Increase in dose does not increase the degree of sedation but it increases the duration of effect (Kumar, A.,2003).

Materials and Methods

Six clinical surgical cases presented to the Teaching Veterinary Clinical Service Complex, Veterinary College, Udgir for various surgical corrections formed material for present study. These animals were administered Inj. Xylazine as a sedative @ 0.03 mg/kg body weight I/M, 15 minutes prior to actual surgical procedure. The clinical parameters like heart rate, respiration rate, rectal temperature, salivation, regurgitation, urination, defecation, eye movement and sedative effect were studied before and after 10, 15, 30 and 60 minutes of sedation.

Results and Discussion

Six clinical cases presented to TVCSC for surgical correction were as follows:

Amputation of Horn - 2 Bullocks

Eye Injury - 1 Bullock

Postpartum prolapse - 1 Cow

Cow with mummified foetus for caesarean section - 1

Upward fixation of patella - 1 Bullock

The clinical parameters were studied before and after 10, 15, 30 and 60 minutes of xylazine sedation. The heart rate was reduced at 30 minutes from 67.83 ± 3.90 to 59.5 ± 3.82 per minute after administration of

xylazine. This might be due to inhibition of both sympathetic and parasympathetic systems due to dose dependent effect of xylazine (Hall and Clarke, 1993). The respiration rate was decreased from 29.16 ± 0.61 to 29.10 ± 1.00 per minute during the phase of sedation. The rectal temperature was reduced from 101.6 ± 0.03 to 101.5 ± 0.06 °F. The reduction in respiration rate and rectal temperature might be due to depression of respiratory center and thermoregulatory centres. Similar observations are also recorded by Lumb and Jones (1984). Salivation and regurgitation were not observed in any animal. Defecation was also not observed in any case. Urination was present in one bullock. The eye movements were decreased during phase of sedation which was normalized after complete recovery from sedation. The sedative effect of xylazine hydrochloride was good in cattle for performing various surgical interventions with local anaesthesia. The sedative effect of xylazine might be due to progressive depression of central nervous system (Hall and Clarke, 1983).

References

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