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**Pharmacodynamics of xylazine, acepromazine and diazepam on various physiological parameters in rabbits**Mian Saeed Sarwar<sup>1</sup>, Hamayun Khan<sup>2</sup>, Naimat Ullah Khan<sup>1</sup>, Hazrat Ali<sup>1</sup>, Ahmad Ali<sup>2</sup> and Ihsanullah Kakar<sup>3</sup><sup>1</sup>Abdul Wali Khan University Mardan, Pakistan<sup>2</sup>The University of Agriculture Peshawar, Pakistan<sup>3</sup>Lasbela University of Water and Marine Sciences Uthal, Pakistan

The objective of this study was to explore the effect of three sedatives i.e. Xylazine (XZ), Acepromazine (AC) and Diazepam (DZ) on physiological parameters such as pulse, respiration, [saeedsarwar@awkum.edu.pk](mailto:saeedsarwar@awkum.edu.pk) temperature and serum glucose. All the three drugs i.e. Xylazine, Acepromazine and Diazepam were used at the dose rate of 8mg/kg, 0.5 mg/kg and diazepam 1mg/kg respectively. Before administration of drugs, all physiological parameters were normal and observed significance decrease in all three parameters after administration. Maximum decrease in the pulse rate was recorded at interval of 60, 30 and 45 minutes and was returned to its normal at 150, 135 and 135 minutes with XZ, AC and DZ respectively. Low respiratory rate was noted at 45, 30 and 75 minutes and were returned to the non-significant level at 105, 90 and 135 minutes

with XZ, AC and DZ respectively. Body temperature was decreased to its maximum at 45, 30 and 60 minutes and returned to its normal at 120, 120 and 135 minutes after administration of XZ, AC and DZ respectively. Onset of sedation was observed at  $2.83 \pm 0.30$ ,  $6.16 \pm 0.47$  and  $3.83 \pm 0.30$  minutes with XZ, AC and DZ respectively. Significant difference ( $P < 0.05$ ) was found with XZ and AC, DZ and AC but there was no significant difference was reported with XZ and DZ. Total duration of sedation was  $101.17 \pm 1.07$ ,  $69.00 \pm 1.87$  and  $90.00 \pm 1.29$  with XZ, AC and DZ respectively. XZ and DZ significantly ( $P < 0.05$ ) increased serum glucose level while AC showed non-significant effect on serum glucose level. Finally it was concluded that all the three drugs were found safe for rabbits but XZ showed the best results.

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