LXX *Convegno* S.I.S.Vet.
XVI *Convegno* **S.I.C.V.** - XIV *Convegno* **S.I.R.A.**
XIII *Convegno* **A.I.P.Vet.** - XIII *Giornata studio* **So.Fi.Vet.** - III *Convegno* **R.N.I.V.**

GUAIFENESIN-KETAMINE-XYLAZINE INFUSION TO MAINTAIN ANESTHESIA IN MULES UNDERGOING FIELD CASTRATION

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Many minor and surgical procedures can be performed in the field under sedation or general anaesthesia. Numerous drug combinations have been used for sedation, induction and maintenance. The purpose of this study was to determine if the combination of guaifenesin, ketamine and xylazine, commonly referred to as “triple drip”, produce safe and satisfactory total intravenous anaesthesia in mules undergoing field castration, premedicated with xylazine and induced with thiopental. Eight healthy adult intact male mules, aged 4 to 6 years and weighing 380 to 490, were anesthetized to performe field castration. Before anaesthesia a 14-gauge, 13–cm catheter was placed percutaneously in the external jugular vein. Mules were premedicated with 1.3 mg/kg xylazine IV and anaesthesia was then inducted with 6 mg/kg IV thiopental within 10 min after premedication, when the animals were at least moderately sedated. Additional xylazine was administered when the mules were inadequately sedated. Sedation was considered good when lowering of the head, drooping of the lower lip and drooping of the ears were present using a 4-point sedation score. Once the mules were recumbent, the infusion of guaifenesin (50 mg/ml) - ketamine (20 mg/ml) - xylazine (0.5 mg/ml) (GKX) was started to maintain general anaesthesia, approximately 1ml/kg/hr (based on monitoring eye signs, muscle relaxation of the neck, respiratory rate and pattern, and the responses to surgical stimulation. The spermatic cord of each testis was infiltrated with 5 ml of lidocaine to achieve local anaesthesia before the scrotum skin incision. The open technique of castration was applied to all mules for postoperative drainage. During anaesthesia heart rate (HR), respiratory rate RR), rectal temperature (RT) and hemoglobin saturation with oxygen (SpO2) were measured every 5 minutes. Times to sternal recumbency, lateral recumbency and standing were recorded. The data recorded were statistically analysed using simple one-way analysis of variance (ANOVA) and a p-

value>0.05 was considered significant. The qualities of anaesthesia were evaluated using induction, maintenance and recovery scores. The resultes suggest that the premedication using 1.3 mg/kg IV xylazine for mules undergoing thiopental anaesthesia was satisfactory and only one animal needed a supplemental dose of xylazine (0.3 mg/kg IV) to induce better sedation. The total IV amount of thiopental for induction was sufficient to achieve lateral recumbency in all animals. Furthermore, GKX provided adequate surgical plane of general anaesthesia to performe castration in all mules, without responses to the manuality or significant modification of HH, RR, RT, and SpO2 in comparison with the basal values and to maintain a satisfactory muscle relaxation. Recovery from anaesthesia was uneventful, smooth and clinically acceptable in all mules.

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