

Xylazine prolongs the duration of action of inverted L blocks in steers

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Introduction

The addition of xylazine to lidocaine has been shown to prolong lidocaine's duration of action when administered as a distal paravertebral block in cattle. This study aimed to determine if the addition of xylazine to lidocaine would prolong the duration of action of lidocaine when administered as an inverted L block.

Materials and methods

Six healthy beef cross steers were enrolled in a randomized cross over study. Both groups received an inverted L block using 6 mg/kg of lidocaine. Group L received lidocaine only and group LX received lidocaine and 0.02 mg/kg of xylazine. There was a 5-day washout period between treatments. Following administration, the onset and duration of action were assessed through a series of needle pricks along the paralumbar fossa every minute for the first 15 minutes, and then every 15 minutes until return of sensation. Sedation scores and heart rates were also collected. Parametric data was analyzed with a paired t-test. Nonparametric data was analyzed using a Wilcoxon signed rank test. A *P*-value < 0.05 was considered significant.

Results

The addition of xylazine to lidocaine significantly prolonged the duration of action of lidocaine from 130 +/- 43.1 minutes to 197.5 +/- 61.7 minutes (*P* = 0.027). Sedation scores were higher in the LX treatment group (*P* = 0.039). There was no difference between groups for onset of action time (*P* = 1.0) or heart rate (*P* = 0.89).

Significance

The addition of xylazine to lidocaine prolongs the duration of action when administered as an inverted L block.

