Effect of hot-iron disbudding on behaviour and plasma cortisol of calves sedated with xylazine

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ABSTRACT

We investigated cortisol and behaviour for the first hour after hot-iron disbudding of calves aged 37 ± 4 days: disbudded after i/m xylazine (n = 10); disbudded after i/m xylazine and regional anaesthesia with lidocaine (n = 10); sham-disbudded after xylazine and lidocaine (n = 11); sham-disbudded after i/m saline and lidocaine (n = 10). Xylazine-treated groups had higher cortisol than saline-treated animals and showed no differences among them at any time. Sham-disbudded calves with xylazine had lower cortisol at 60 min compared with all other times. Xylazine-alone disbudded calves struggled more during the procedure than all other groups. Xylazine-alone disbudded calves showed more ear-flicks at 10, 25 and 40 min and head-shakes at 40 min than all other groups. We conclude that cortisol should not be used as an indicator of pain in disbudded calves while under the sedative effect of xylazine and that some behaviours during and after the procedure are useful in showing that xylazine alone does not control hot-iron disbudding pain.

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