

Abstract

Flystrike costs the Australian industry \$173-280M per annum and 70-80% of Merino lambs are currently mulesed. To alleviate welfare concerns there has been significant adoption of analgesics to mitigate pain associated with mulesing. The objective of this study was to determine the effectiveness of Tri-Solfen® and Metacam 20 (a non-steroidal anti-inflammatory drug) at reducing pain-related behavioural responses to mulesing in Merino lambs. One hundred and forty lambs were allocated to seven treatment groups: (1) Sham mules; (2) mules; (3) Metacam 20 15 minutes prior to mulesing; (4) Tri-Solfen®; (5) Tri-Solfen and saline injection 15 minutes prior to mulesing; (6) Tri-Solfen® and Metacam 20 15 minutes prior to mulesing; (7) Metacam 20 at time of mulesing. Behavioural responses, such as standing, walking and lying were measured on day of marking and for four days thereafter. Standing and walking was then categorised into pain and normal related behaviours while lying remained in its own category. Mulesed lambs with no pain relief displayed significantly more pain-related behaviours than sham lambs (40% vs. 7.3%; $P < 0.05$). Lambs that received combination pain relief were observed to display significantly less pain-related behaviour than mulesed lambs with no pain relief on day of marking (28.3% vs. 40.5%; $P < 0.05$). Administration of Metacam 20 or Tri-Solfen® on their own appeared to have minimal if any significant effect at mitigating pain-related behaviours on the day of marking, but this needs to be confirmed using other quantitative and qualitative assessments of pain. Further research is also needed to optimise the time of Meloxicam administration and the dose administered.