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The equine pain face

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Identifying and monitoring pain is the foundation of optimal pain management. In addition to previously identified behavioural indicators of pain, facial expressions might be a valid parameter, adding further strength to composite pain scales in horses. The aims of this qualitative study were, to identify visible changes in facial expressions of horses experiencing induced acute pain and to determine whether the presence of an observer would influence these pain expressions.

Six horses were included in the study; each horse was subjected to two different pain modalities twice, with and without an observer present. The two pain types induced were; ischemic pain, induced by application of a tourniquet and inflammatory pain, induced by topically applied capsaicin. Facial expressions indicative of pain were identified by comparing video recordings of baseline sessions with periods of induced pain.

Both types of pain effectively resulted in observable differences in facial expressions, primarily observed as, 1) ears moving out of synchrony and/or resembling "lambs' ears", 2) a tense stare and angled eye brows, 3) edged upper lip and medio-laterally widened nostrils 4) tension of the facial muscles. These pain-induced facial expressions were not influenced by the presence of the observer, although other pain behaviours were intensified or suppressed by some of the horses.

The present study clearly identified facial expressions indicative of pain in horses. These expressions might prove valuable in future development of composite pain scores for use in horses. Further work is required to determine whether these facial expressions are quantifiable and consistently present in all pain types and intensities.