Facial expressions as a tool for pain recognition in horses

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FACIAL EXPRESSIONS

as a tool for pain recognition in horses

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CONCLUSION

Facial expressions of pain can be appreciated in horses with clinical pain and may therefore prove useful for future pain scoring regimes. Furthermore learning to recognize facial expressions of pain is feasible and the agreement between raters after a 20 minutes training session was moderate. The results also indicate that a pain face scale may not need to score all pain face features separately but scoring pain face yes/no and the intensity of the expression may be sufficient and may be more applicable.

NO PAIN

NO PAIN

MILD PAIN
(low degree lameness –arthritis- and mild gastric ulcerations)

MILD-MODERATE PAIN
(One day post-operative stiffle surgery)

OBJECTIVE

The aim of the study was to investigate the presence of a pain face in horses with clinical pain

MODERATE PAIN
(15 days post-operative colic surgery)

MODERATE-SEVERE PAIN
(Severe gonitis)

SEVERE PAIN
(Acute inflammatory arthritis, radio-carpal joint)

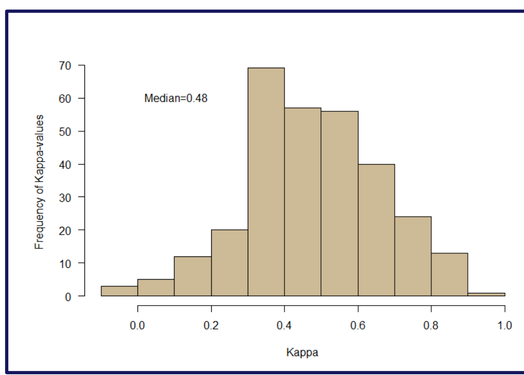
SEVERE PAIN
(Wound penetrating the carpal joint, rupture of ext. tendon)

BACKGROUND

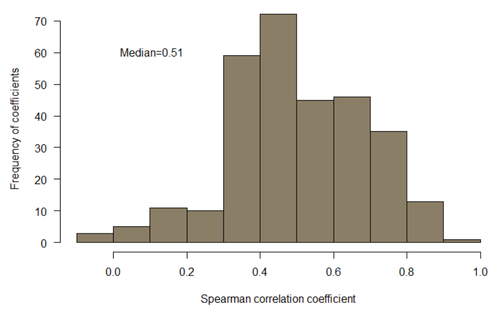
Recognizing pain in horses is challenging but vital for reducing the occurrence of untreated pain. Facial expressions in horses includes changes in five areas of the face as explained in the illustrations below

METHODS

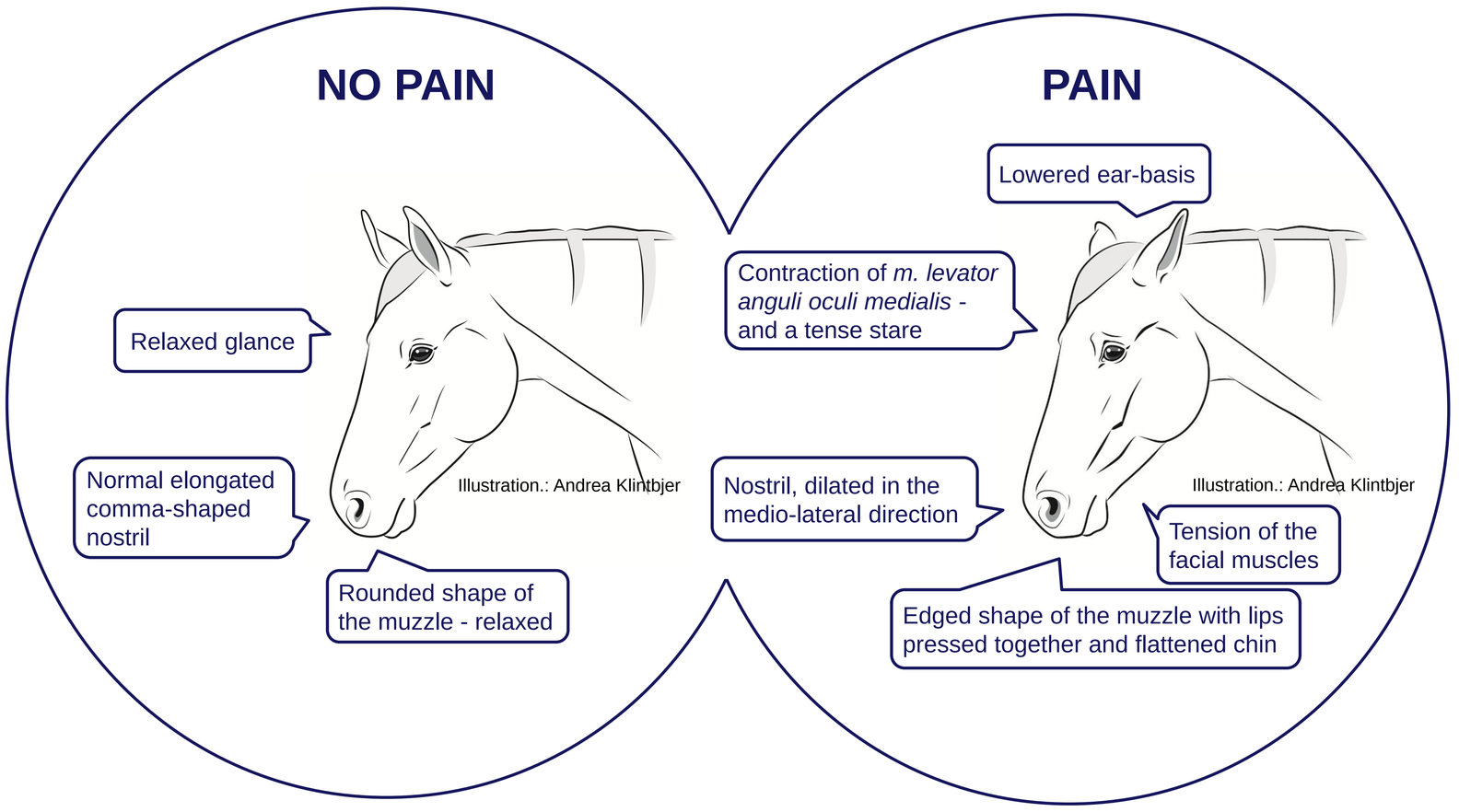
Eighteen hospitalized horses with known clinical diagnoses were included. Twenty-five persons participated in a 20 minutes training session on the features of the equine pain face. Subsequently they scored pain face yes/no and the intensity of the pain face as ‘low’, ‘medium’ or ‘high’ in a 20-30 seconds video sequence of each of the eighteen horses.



Agreement on the presence of a pain face (Distribution of pairwise Cohen’s Kappa for 25 observers)



Agreement on the intensity of the pain face (Distribution of pairwise Spearman correlation for 25 observers)



RESULTS

The participants scored the horses correctly in 61% - 94% (mean 82%) of the cases. The median for the pairwise Cohen’s Kappa values were 0.48 and the pairwise Spearman correlation of the intensity of the pain face was 0.51.