Case study: Effect of the noseband positioning to the fascial and neural dynamics of the head

Tuulia Luomala PT, Mika Pihlman PT, Rikke M. Schultz¹, Vibeke S. Elbrønd²
MT-Physio Oy, Hakkarintie 5, 37550 Lempaala, Finland. Tel. +358 405366853 email: tuulia.luomala@gmail.com
¹DVM, RMS Equine Practice, Karlebovej 22, 2980 Kokkedal, Denmark, rms@rikkeschultz.dk
²DVM, Ph.D., Ass. Prof. Anatomy, IVH, Faculty of Health & Medical Sciences, Copenhagen University, Denmark, vse@sund.ku.dk

BACKGROUND: Different bridles and their fitting is an issue that should be highlighted in equestrian sports. Riders and coaches are trying to find the best solution for the horse. Bridle fitting is often practical and there are no anatomical basics behind the different noseband positioning. Horses can show pain and discomfort with their gestures, but the signs are often neglected. Hypothesis of this study is that positioning of the noseband is altering the fascial and neural dynamics. Aim of the study was to provide anatomical background for the bridle fitting from the fascial and neural perspective.

METHOD: Dissection of the one equine cadaver. Model of noseband was duct tape, which was positioned in three levels. High, regular and low positioning. Facial nerves were pulled in all three positions and movement of the fascia and nerve were recorded with video camera and imaging.

RESULTS: Movement of the facial nerve is altered, when the noseband is contacted tightly to the tissue. Movement is most limited when using low positioning of the noseband. This positioning of the noseband is common with young horses. Also high positioning of the noseband is creating movement dysfunction of the fascia and nerve, when the noseband is tightly pressed. Regular positioning of the noseband seems to affect least to the movement of the fascia and fascial nerve. Also m. masseter and area of the ear are affecting fascial and neural dynamics of the head. This is why browbands are as meaningful as noseband when thinking fascial and neural dynamics of the head.

CONCLUSION: Riders and coaches should fit the bridles individually with every horse. Noseband and also browband should be loose enough, so that they are not creating pressure to the fascial or neural system. Also height of the noseband is meaningful, low positioning should be avoided according to our findings, because it is creating the largest dysfunction of the fascial and neural system.

FIG 1. Noseband positioning.
Number 1 lower, 2 regular and 3 high positioning of the noseband.