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Twitching in Veterinary Procedures: How Does this Technique Subdue Horses?

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Title: Twitching in Veterinary Procedures: How Does this Technique Subdue Horses?***Benjamin Flakoll^{ab}, Ahmed B. Ali^c, and Carl Y. Saab^{ab}**

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This study investigates the mechanisms by which two forms of restraint (lip twitch and ear twitch) subdue horses. Prior research suggests that the lip twitch subdues horses through an analgesic effect; the mechanism of the ear twitch is unknown. Heart rate (HR) and heart rate variability (HRV) were measured to determine autonomic nervous system activity before and during application of the twitches, and salivary cortisol (SC) levels were analyzed to assess stress levels before and after application of the twitches. Twelve male horses (all geldings) were divided into two groups. One group received the lip twitch, the other received the ear twitch. Results show that the lip twitch significantly decreased HR and increased HRV when applied for 5 minutes. However, when the lip twitch was applied for a longer period, it significantly increased HR and decreased HRV. The ear twitch significantly increased HR, decreased HRV and increased SC levels regardless of the length of application. It is concluded that the lip twitch might initially subdue horses through a calming, probably analgesic effect at least in the initial 5 minutes, while the ear twitch evokes a stressful response, immobilizing horses through fear and/or pain.

Key Words

Equine; twitch; stress; cortisol; heart rate.

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