

2. Summary

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Musculoskeletal diseases have a significant impact on athletic performance and animal welfare. Diseases of the interosseous muscle, with particular emphasis on desmopathy of the proximal attachment, can cause lameness and behavioral problems in horses. Most patients with chronic disease, both in the thoracic and pelvic limbs, show subtle clinical symptoms, and chronic inflammation or repeated injuries can lead to changes in tissue structure, including bone. These changes can be diagnosed using, among others, ultrasound and magnetic resonance imaging. Based on the available scientific studies, a potential relationship between local adipose tissue and vascularization of the proximal interosseous muscle attachment and degenerative processes, and pain sensation in chronic diseases of the proximal interosseous muscle attachment has been noticed. It seems that many aspects related to SL diseases in horses can be discussed taking into account the knowledge of Achilles tendon tendinopathy. Adipose tissue is an important component of the interosseous muscle in horses, which, as in the case of the anatomical relationship between the Achilles tendon and the Karger fat body, may be a source of adipocytokines both in physiological conditions and at all stages of the disease. It is now known that adipocytokines cannot be seen as involved in single disease processes, but as molecules with diverse physiological functions. The role of adipocytokines in the processes of rehabilitation of diseases of the musculoskeletal system and during training in humans was also marked. The role of adipocytokines in the pathogenesis of diseases of the musculoskeletal system, bone tissue metabolism, including the impact on bone remodeling processes and degenerative changes in joints has been demonstrated. In the own results of this study, a lower concentration of resistin was found in horses with interosseous muscle desmopathy, and higher in the venous blood plasma of horses regularly working. In the horses studied in this work, higher levels of resistin and IL-8 were noted in all paddocked horses and in the group of horses in training. The obtained data show that the concentrations of i.a. plasma resistin may be clinically relevant. The attempt to search for the etiopathogenesis of the processes taking place in the area of the proximal attachment of the interosseous muscle may optimize treatment and rehabilitation procedures.