

Comparative ultrasonographic measurements of metacarpal and metatarsal tendons and ligaments thickness in sound Dareh-shori horses

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Received: 30.12.2021

Accepted: 09.05.2022

Abstract

Tendons and ligaments in palmar/plantar aspect of metacarpus/metatarsus are always exposed to injuries resulting from traumas and diseases of limbs. Ultrasonographic evaluation enables measuring the thickness of tendons and ligaments as an important indicator in the health assessment of soft tissues in the limbs of a horse. This study was conducted on 5 healthy Dareh-shori horses with a Mean age of 11.2 ± 3.5 years and height of 131.6 ± 10.2 cm. After clipping and washing, the area between accessory carpal bone and fetlock joint was divided into 6 zones and 2 levels in sagittal and 4 levels in transverse view. Ultrasonography was performed with a linear transducer 12 MHz Frequency on both front limbs in full weight bearing. Measurements of tendons and ligaments such as Superficial digital flexor tendon, Deep digital flexor tendon, Inferior check ligament and Suspensory ligament were done both in sagittal (1 and 2) and transverse (1, 2, 3 and 4) view. Transverse ultrasonogram was made to get the thickness of tendons and ligaments. Echogenicity and fibrillary pattern of tendons and ligaments were assessed in longitudinal images. In the front and hind limbs, the lowest thickness was related to the inferior check ligament while the greatest thickness in the front limbs was related to the deep digital flexor tendon. Moreover, the greatest thickness in the hind limbs was related to the suspensory ligament. There were no significant differences between the results obtained from the thickness measurements of the tendons and ligaments in the left and right front and hind limbs of sound dareh- shori horses.

Key words: Ultrasonography, Tendons and Ligaments, Metacarp and Metatars, Dareh-Shori horses, Thickness

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