

Ultrasonographic measurements of metatarsal tendons and ligaments dimensions in sound Dareh-shori horses

Roham Vali^{1*} and Behnam Rajaie²

¹ Assistant Professor, Department of Clinical Sciences, Faculty of Veterinary Medicine, Kazerun Branch, Islamic Azad University, Kazerun, Iran

² DVM Graduated, Faculty of Veterinary Medicine, Kazerun branch, Islamic Azad University, Kazerun, Iran

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Abstract

Inflammation of tendons and ligaments in the plantar aspect of metatarsus is one of the main causes of lameness in horses. The most damage rate to the tendons and ligaments of hind feet has been reported in the plantar region of the metatarsus which is always exposed to injuries resulting from traumas and diseases of the limbs. Ultrasonographic evaluation enables observation and diagnosis of the tendons and ligaments injuries and also limbs diseases. Changes in size, echogenicity and shape of tendons and ligaments and also the status of repair can be carried out by ultrasonography. Moreover, ultrasonography is currently being used to assess tendon/ligament healing. This study was conducted on 5 healthy Dareh-shori horses with a Mean age of 13.8 ± 5.38 years and height of 128.8 ± 13.15 cm. None of the horses showed clinically disorders in the hind limbs. 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. An ultrasonography was performed with a linear transducer 12 MHZ frequency range on both hind 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 using both sagittal (1 and 2) and transverse (1, 2, 3 and 4) views. Transverse ultrasonography was made to get the measurements such as thickness, width and cross-sectional area of tendons and ligaments. Echogenicity and fibrillary pattern of tendons and ligaments were assessed in longitudinal images. As the results in the present study revealed, no significant differences were found between the amounts of the right and left hind limbs.

Key words: Ultrasonography, Tendons and Ligaments, Hind feet, Dareh- Shori horses, Metatars

* **Corresponding Author:** Roham Vali, Assistant Professor, Department of Clinical Sciences, Faculty of Veterinary Medicine, Kazerun Branch, Islamic Azad University, Kazerun, Iran
E-mail: Rohamvali@gmail.com



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