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The accuracy of musculoskeletal ultrasound examination for the exploration of meniscus injuries in athletes.

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Abstract

AIM: Meniscus **injuries** represent a frequently occurring pathology in athletes and require an optimum diagnosis protocol. This study aimed to evaluate the accuracy of ultrasound examination for the identification of meniscus **injuries**, in comparison with magnetic resonance imaging (MRI), using the **arthroscopy** as reference.

METHODS: This prospective longitudinal comparative study included 45 athletes who were clinically examined by MRI and further, by **arthroscopy**, in a medical center dedicated to **sport** traumatology.

RESULTS: The conventional ultrasound exploration of the knee allowed the identification of a diverse pathology, presenting a sensitivity of 88.8% for the diagnosis of medial meniscus **injuries** and 70.0% for the lateral meniscus. The specificity was 77.7% for the medial meniscus and 96.0% for the identification of lateral meniscus **injuries**. Using MRI, a sensitivity of 69.4% was obtained for the medial meniscus and 75.0% for the lateral meniscus, with a specificity of 76.6% for the pathology of medial meniscus and 80.0% for the lateral meniscus. Statistical analysis, based on the comparison of ROC curves, did not show any significant difference between the two applied diagnostic techniques ($p = 0.061$ for the medial meniscus and $p = 0.534$ for the lateral meniscus).

CONCLUSION: The musculoskeletal ultrasound exploration of the knee joint, performed in a medical center with high addressability, by an experienced examiner, was able to identify the medial and lateral meniscus **injuries** with an accuracy comparable to that of MRI examination.

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CONCLUSION: The musculoskeletal ultrasound exploration of the knee joint, performed in a medical center with high addressability, by an experienced examiner, was able to identify the medial and lateral meniscus **injuries** with an accuracy comparable to that of MRI examination.

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