Possibilities of Magnetic Resonance Diagnostics of Latent and Stressful Ankle and Foot Damage in Football Players (Literature Review and Own Clinical Reviews)

Z. M. Magomedova, E. A. Egorova

Moscow State University of Medicine and Dentistry named after A. I. Evdokimov, Ministry of Healthcare of Russia, Department of Radiology

Abstract

The studies contributed to establish the fact that only complex radiation examination using X-ray, MR-diagnostic allows to make a definitive diagnostic conclusion about posttraumatic changes in the ankle area in view of the pathology of bones, tendoligamentous apparatus, as well as to plan the scope of conservative and surgical treatment.

Key words: Magnetic Resonance Imaging, Stress Damage, Hidden Fractures, Ankle, Foot.

References

1. *Egorova E. A.* X-ray diagnostics in osteology. Textbook for doctors and students of medical schools. OOO «Stolitsa». 2015. 556 p. (in Russian).
2. *Zalomaeva A. P., Egorova E. A., Petrova E. I.* Beam diagnosis of occult fractures of lower extremities bones. Radiologiya — praktika. 2013. No. 5. P. 42–46 (in Russian).
3. *Shotemor Sh. Sh., Donchenko S. V., Vasil'ev A. Yu., Egorova E. A.* Radiation diagnosis of diseases of bones and joints: National leadership. Fractures and dislocations of bones. Moscow, GEOTAR-Media. 2015. P. 74–321 (in Russian).
4. *Bae W. C., Ruangchaijatuporn T., Chung C. B.* New techniques in MR imaging of the ankle and foot. Magn. Reson. Imaging. Clin. N. Am. 2017. V. 25 (1). P. 211–225.
5. *Barelds I., Krijnen W. P., van der Leur J. P., van der Schans C. P., Goddard R. J.* Diagnostic accuracy of clinical decision rules to exclude fractures in acute ankle injuries: systematic review and meta-analysis. J. Emerg. Med. 2017. V. 53 (3). P. 353–368.
6. *Golano P., Vega J., de Leeuw P. A. et al.* Anatomy of the ankle ligaments: a pictorial essay. Knee Surg. Sports Traumatol. Arthrosc. 2016. V. 24 (4). P. 944–956.
7. *Gursoy M., Dag F., Mete B. D. et al.* The anatomic variations of the posterior talofibular ligament associated with os trigonum and pathologies of related structure. Surg. Radiol. Anat. 2015. V. 37 (8). P. 955–962.
8. *Martin R. L., Davenport T. E., Paulseth S., Wukich D. K., Godges J. J.* Orthopaedic section american physical therapy association ankle stability and movement coordination impairments: ankle ligament sprains. J. Orthop. Sports Phys. Ther. 2013. V. 43 (9). P. A1–A40.
9. *Meijer D. T., de Muinck Keizer R. J., Doornberg J. N.* Diagnostic accuracy of 2-dimensional computed tomography for articular involvement and fracture pattern of posterior malleolar fractures. Foot Ankle Int. 2016. V. 37 (1). P. 75–82.

10. *Miller J. R., Dunn K. W., Ciliberti L. J. Jr., Eldridge S. W., Reed L. D.* Diagnostic Value of Early Magnetic Resonance Imaging After Acute Lateral Ankle Injury. J. Foot Ankle Surg. 2017. V. 56 (6). P. 1143–1146.
11. *Petersen W., Rembitzki I. V., Koppenburg A. G. et al.* Treatment of acute ankle ligament injuries: a systematic review. Arch. Orthop. Trauma. Surg. 2013. V. 133 (8). P. 1129–1141.
12. *Pires R. E. S., Pereira A. A., Abreu-e-Silva G. M. et al.* Ottawa Ankle Rules and Subjective Surgeon Perception to evaluate radiograph necessity following foot and ankle sprain. Ann. Med. Health. Sci. Res. 2014. V. 4. P. 432–435.
13. *Sharma G. K., Dhillon M. S., Dhatt S. S.* The influence of foot and ankle injury patterns and treatment delays on outcomes in a tertiary hospital; a one-year prospective observation. Foot (Edinb.). 2016. V. 26. P. 48–52.
14. *Tafur M., Rosenberg Z. S., Bencardino J. T.* MR imaging of the midfoot including Chopart and Lisfranc joint complexe: Magn Reson Imaging. Clin. N. Am. 2017. V. 25 (1). P. 95–125.
15. *Wang X., Chang S. M., Yu G. R., Rao Z. T.* Clinical value of the Ottawa ankle rules for diagnosis of fractures in acute ankle injuries. PLoS One. 2013. V. 8 (4). P. 63228.

Authors

Magomedova Zavazhat Magomedovna, Postgraduate of Department of Radiology, Moscow State Medical University of Medicine and Dentistry named after A. I. Evdokoimov, Ministry of Healthcare of Russia.
Address: 9a, ul.Vucheticha, Moscow, 127206, Russia.
Phone number: +7 (495) 611-01-77. E-mail: ros-trum1@yandex.ru

Egorova Elena Alekseevna, M. D. Med., Professor, Professor of Department of Radiology, Moscow State Medical University of Medicine and Dentistry named after A. I. Evdokoimov, Ministry of Healthcare of Russia.
Address: 9a, ul.Vucheticha, Moscow, 127206, Russia.
Phone number: +7 (495) 611-01-77. E-mail: tylsit@mail.ru