The Significance of MRI in Process Change of Osteochondral Lesion of Talus

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Introduction/Purpose: To evaluate if the MRI Signals can be the predictor of osteochondral lesion of talus

Methods: From Jul. 2012 to Oct. 2014, 3.0T MRI scanning was performed in 20 cases of ankle sprain. MRI scanning was performed every 3 months and the followed-up time of each case was 12 months. The signal of cartilage, subchondral bone and marrow edema were recorded and analyzed comparatively.

Results: The signal of marrow edema in talus body of 14 cases were decreased step by step and disappeared eventually. The time from injury to the marrow edema disappear was more than 9 months. 4 cases became III° osteochondral lesion and 2 cases have subchondral bone cyst formation.

Conclusion: The reason of OLT and pain were under discussion. After sprain, what changes occurred in the talus body and cartilage were under debate. How the subchondral bone cyst formation was unknown. Continuous MRI scanning may have some value in evaluation of the OLT. From the results of our study, we can see that the edema signal in most case can disappear in about 9 months. The OLT and cyst formation may resulted from violent force and no-standard conservative treatment. MRI scanning can help the surgeon decide when to perform operation and choice the operative procedure.

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