

MRI Has Sensitivity of 45% in Chondral Lesions

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SAN DIEGO — The overall sensitivity of MRI to detect chondral lesions found during arthroscopic knee surgery was only 45%, results from a study of 190 patients demonstrated.

The finding suggests that knee arthroscopists should be prepared to intraoperatively detect and treat chondral lesions that have been previously undiagnosed by MRI, Dr. Alex Vaisman said at a symposium sponsored by the International Cartilage Repair Society.

"Based on our results, we recommend that the instrumentation for different cartilage repair techniques should always be

positive correlation between both diagnostic instruments.

The average age of the 190 patients in the study was 35 years, and 116 were male. Most indications for arthroscopic surgery were for anterior cruciate ligament tears and meniscal tears.

On arthroscopy, Dr. Vaisman and fellow researchers found 115 chondral lesions in 82 patients. Most (72%) were single lesions located on the medial femoral condyle (32%) or the medial patella (23%). The av-

erage size of these lesions was 1.99 cm². Almost two-thirds of the lesions (63%) were classified as International Cartilage Repair Society (ICRS) grades 2 or 3-A.

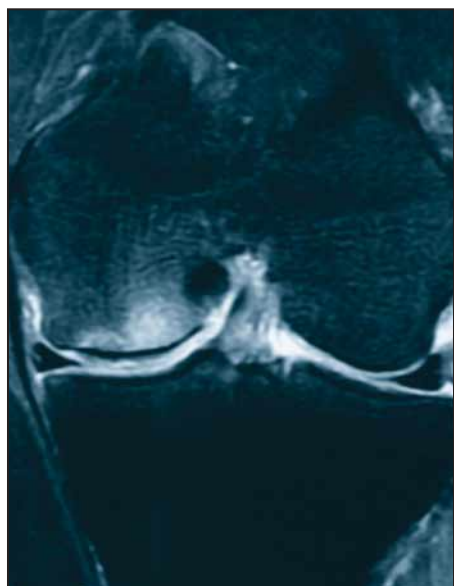
There was no correlation between patient age and the number of lesions, but there was a direct correlation between patient age and the size of the lesion.

On MRI, chondral lesions were reported in 37 out of 82 patients, which translated into a sensitivity of 45% and a specificity of 100%.

When researchers analyzed MRI sensitivity by location of the defect, they observed that MRI was most accurate for patellar defects (53%), followed by femoral defects (43%) and tibial defects (16%).

When they analyzed the MRI sensitivity by the ICRS classification system, significant differences emerged.

For example, the MRI sensitivity for ICRS grade 1 lesions was 13%, compared with 53% for grade 2 lesions, 64% for grade 3 lesions, and 73% for grade 4 lesions. ■



MRI detected this medial femoral condyle osteonecrosis and lesion.



The same medial femoral chondral lesion is shown in arthroscopic view.

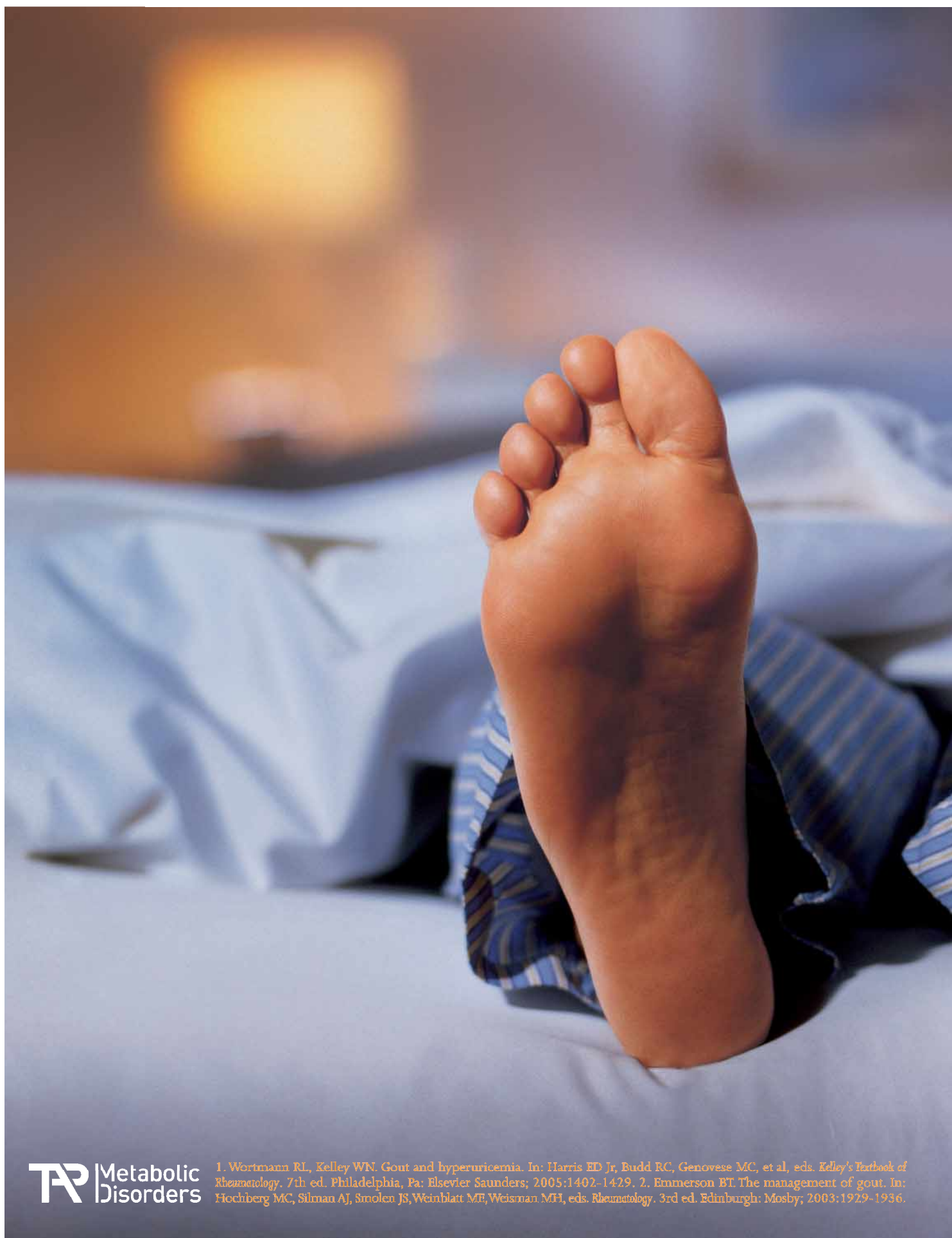
available [at] the time of an arthroscopic knee procedure," said Dr. Vaisman, of the Universidad Del Desarrollo, Santiago, Chile.

The purpose of the study was to prospectively evaluate the incidence and morphologic characteristics of chondral lesions following arthroscopic knee surgery and to establish the correlation between microscopic and MRI findings.

Dr. Vaisman and his associates evaluated 190 consecutive knee procedures performed between March 2003 and February 2004 by two surgeons with 15 years of knee surgery experience.

Two musculoskeletal radiologists with 10 years of experience generated the MRI reports.

The time between MRI exam and knee surgery did not exceed 1 year. The MRI report of at least one chondral lesion found at arthroscopy was considered to be a



Metabolic Disorders

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