

Sunburn appearance on MRI

T Bartalena, M Rinaldi, E Rimondi, G Rossi, D Bartalena

Citation

T Bartalena, M Rinaldi, E Rimondi, G Rossi, D Bartalena. *Sunburn appearance on MRI*. The Internet Journal of Radiology. 2008 Volume 10 Number 2.

Abstract

The appearance of solar erythema as an incidental finding in a knee MRI scan is shown.

CASE REPORT

A 48 years old male was referred for MRI of his right knee because of a suspected torn medial meniscus. MRI showed a longitudinal tear of the posterior horn of the medial meniscus and a moderate articular effusion. However an unexpected finding was brought to the attention of the interpreting radiologist: abnormal signal hyperintensity was present on the proton density weighted fat suppression (PDFS) sequences in the subcutaneous soft tissue in the anterolateral aspect of the knee (Fig.1A-B). At the end of the MRI scan, physical examination of the patient was performed and revealed erythema of both thighs consistent with a sunburn (Fig.1C). The patient confirmed he passed the day before at the beach and forgot to use his sunscreen lotion.

DISCUSSION

Soft tissues hyperintensity on fluid sensitive sequences is an aspecific MRI finding that may be encountered in a variety of situations including infectious etiologies ranging from simple cellulitis to life threatening conditions like necrotizing fasciitis [1], and noninfectious causes like cellulitis accompanying venous thrombosis [2], rheumatologic diseases like dermatomyositis [3] or to benign causes like fluid overload [4] or simple solar erythema like the case we presented. Clinical history and physical examination are fundamental in the differential diagnosis.

Figure 1

Figure 1: A-B. MRI of the right knee: axial and sagittal PDFS images showing subcutaneous soft tissue hyperintensity consistent with edema. C. Physical examination of the patients inferior limbs shows redness of the skin of both knees caused by overexposure to ultraviolet radiation.



References

1. Loh N, Ch'en IY, Cheung LP, Li KCP. Deep Fascial Hyperintensity in Soft-Tissue Abnormalities as Revealed by T2-Weighted MR Imaging. *AJR*. 1997;168:1301-1304.
2. Kaplan P, Helms CA, Dussault R, Anderson MW, Major NM. Musculoskeletal MRI. W.B. Saunders. St. Louis 2001.
3. Kimball AB, Summers RM, Turner M, Dugan EM, Hicks J, Miller FW, Rider LG. Magnetic resonance imaging detection of occult skin and subcutaneous abnormalities in juvenile dermatomyositis. Implications for diagnosis and therapy. *Arthritis & Rheumatism*. 2000;43:1866-1873.
4. Meler JD, Solomon MA, Steele JR, Yancy CW, Parkey RW, Fleckenstein JL. The MR Appearance of Volume Overload in the Lower Extremities. *Journal of Computer Assisted Tomography*. 1997;21:969-973.

Author Information

Tommaso Bartalena, MD

Poliambulatorio Privato Zappi Bartalena Centro Medico Diagnostico, Imola, Italy

Maria Francesca Rinaldi, MD

Radiologia III – Policlinico S.Orsola-Malpighi, Bologna, Italy

Eugenio Rimondi, MD

Radiologia – Istituto Ortopedico Rizzoli, Bologna, Italy

Giuseppe Rossi, MD

Radiologia Interventistica Angiografica – Istituto Ortopedico Rizzoli, Bologna, Italy

Dario Bartalena, MD

Poliambulatorio Privato Zappi Bartalena Centro Medico Diagnostico, Imola, Italy