ULTRASOUND FINDINGS IN THE DIAGNOSIS OF EXERCISE-INDUCED RHABDOMYOLYSIS - A CASE REPORT

Maria Joao Sousa[1], Sara Martins[1], Diana Serra[2], Carolina Paiva[1], José Eduardo Sousa[1], Nuno Madureira[1], Sofia Moreira[1], Ines Morais[1], André Ribeiro[1], João Paulo Castro[2]

[1] Centro de Medicina de Reabilitação da Região Centro – Rovisco Pais, Portugal
[2] ULS São João, Portugal
e-mail: mjoaosousa16@hotmail.com

Background

Rhabdomyolysis is an acute clinical syndrome characterized by muscle damage, which can lead to systemic complications. Early diagnosis prevents complications, but also improve prognosis. The clinical presentation is characterized by a triad of myalgias, muscle weakness and dark urine. The incidence of exercise-induced rhabdomyolysis(EIR) has been increasing. EIR is observed in high-performance athletes who are subjected to intense, repetitive and prolonged exercise but is also observed in untrained individuals. Temperature/humidity during training, medications and genetic factors are also risk factors.

Case report

The authors present the case of a 54-year-old healthy male with sporadic exercise practices, who went to the PRM consult due to bilateral forearm myalgias associated with decreased strength and edema, after physical exercise two days earlier. Denied trauma, urine change or the use of drugs. At physical examination, had tense edema and tenderness. An ultrasound was made during the assessment, which revealed a decrease in echogenicity, disorganization of the muscular structure and infiltration of adipose tissue. On suspicion of rhabdomyolysis, an analytical study was performed which revealed high level of creatine kinase (CK) without renal function alterations. Treatment included water reinforcement, draining massage, cryotherapy and rest. With a favorable progression, after 2 weeks showed complete recovery.

Conclusion

The classic triad of EIR is very sensitive, but less than 10% of patients report all three symptoms at initial presentation. The case presented is an example of this diagnostic difficulty, as although the patient presented with pain and muscle weakness, the absence of myoglobinuria may lead to think of other diagnoses. Studies have shown typical echographic alterations present in rhabdomyolysis, which increase the level of suspicion, guiding the etiological study. Physical exercise is an increasingly common cause of rhabdomyolysis and the use of ultrasound as a method of evaluating muscle pain helps in the early diagnosis of EIR, especially in sports practice.

Keywords: exercise, rhabdomyolysis, ultrasound, diagnosis