

The diagnostic value of a sports injury

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Background:

Acute lymphoblastic leukaemia (ALL) is a haematological malignant disease characterised by a large number of immature lymphocytes. It is the most common type of cancer in children. Symptoms may include bleeding gums, bone pain, fever, frequent infections, lymphadenopathy, pale skin, shortness of breath and fatigue.

Case presentation:

A sixteen-year-old boy had a COVID-19 infection in March of 2023 after which he started experiencing slight fatigue. Nevertheless, he was playing football several times per week when at the beginning of April 2023 he obtained an injury to the right vastus medialis muscle. A haematoma that appeared was drained by a sports medicine physician but the swelling reappeared. Several days later he noticed lumps inside his oral cavity and went to the emergency department. Initial blood work showed high levels of lymphocytes, so the patient underwent more extensive diagnostics. Peripheral blood smear showed 86% blasts, 11% lymphocytes, and a very low thrombocyte count. Lymphadenopathy and hepatosplenomegaly could be seen on the ultrasound of the neck and abdomen. MSCT of the thorax showed an expansive process in the upper mediastinum and on the MR of the brain, haemorrhagic bleeding could be seen. A bone marrow biopsy showed a domination of blasts of 92%. Cytogenetic analysis showed the deletion of both alleles of CDKN2A genes. The patient was diagnosed with high-risk ALL and started treatment with the ALL-IC BFM 2009 protocol on April 30th, 2023. During the treatment so far, the patient has experienced transitory acute kidney insufficiency and fungal pneumonia. He is regularly undergoing diagnostic testing and examinations. The treatment is still ongoing.

Conclusion:

This case emphasizes the significance of sports medicine in promptly identifying suspicious bruising disproportionate to the associated injury, as such manifestations can serve as the initial and singular symptom of Acute Lymphoblastic Leukemia (ALL). Also, active athletes, taught to be pushed to the limits, can easily dismiss their fatigue, especially masked by post-COVID symptoms.