

Prevalence of hypovitaminosis D in patients with juvenile osteochondritis dissecans

Abstract

Background: Juvenile osteochondritis dissecans (JOCD) is an acquired joint disease of unknown etiology that affects skeletally immature patients and has the potential to progress to osteoarthritis. Recent studies have reported a high prevalence of vitaminD deficiency in patients with osteochondral lesions. The aim of our study was to determine serum vitaminD levels in patients diagnosed with JOCD.

Methods: Serum 25(OH)D levels of 31 patients (22 males) presenting 40 lesions (29 JOCD of the knee, and 11 of the ankle) were evaluated. The average age was 11.9 ± 2.9 years. HypovitaminosisD was defined as a value less than 30ng/mL and was divided into vitaminD insufficiency (20 to 30ng/mL) and vitaminD deficiency (<20ng/mL).

Results: HypovitaminosisD was present in 45.2% of the evaluated patients (32.2% insufficiency and 13% deficiency). No significant differences were found in the mean values and incidence of hypovitaminosis between those patients in which the sample was taken in warm or cold season ($P=.267$ and $P=.875$, respectively). Patients who required surgery had a higher incidence of hypovitaminosis than those treated conservatively (60% versus 31%, $P=.054$). There was no correlation in the incidence of hypovitaminosis with sex, location, stability of the lesion, or if the lesion was uni- or bilateral.

Conclusion: In our series, almost half of the patients diagnosed with JOCD presented abnormal serum levels of vitaminD. A two-fold incidence of

hypovitaminosis was observed in patients requiring surgical treatment compared to patients managed conservatively. The association found in this study does not imply causation, but it should be considered within the set of actions for the treatment of these injuries.

Keywords: Diseño del estudio: Estudio transversal; Hipovitaminosis D; Hypovitaminosis D; Juvenile osteochondritis dissecans; Level of evidence 3; Nivel de evidencia 3; Osteocondritis disecante juvenil; Study Design: Cross-sectional study; Vitamin D; Vitamina D.

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