Approach to the Patient with Noninflammatory Musculoskeletal Pain

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KEYWORDS

• Musculoskeletal pain • Hypermobility syndrome
• Overuse syndrome • Pain amplification syndromes

Musculoskeletal pain is one of the most common presenting symptoms at the pediatrician's office. Etiology ranges from benign conditions to serious ones requiring prompt attention. This article discusses entities presenting as musculoskeletal pain while not being associated with arthritis, the latter being dealt with in detail in other articles in this issue. The most common nonarthritic conditions are benign limb pain of childhood (growing pains), hypermobility, overuse syndromes with or without skeletal abnormalities, malignancies, and pain amplification syndromes. **Fig. 1** shows the possible initial decision process regarding evaluation, after ruling out trauma and infection.

BENIGN LIMB PAIN OF CHILDHOOD

When to Consider

Benign limb pain is a chronic, intermittent, paroxysmal nighttime shin pain without daytime symptoms or limitation.

Background

Benign limb pain is also known as growing pains; a clear misnomer because it usually occurs outside of major growth spurt periods between ages 3 to 5 and 8 to 12 years. Children are characterized by recurrent lower extremity pain, mostly bilateral,[1] occurring at night or in the evenings. The prevalence is variable, between 4% and 37% of studied children, depending on the targeted age groups.[2,3] Diagnostic criteria were suggested by Naish and Apley[3] in 1951 (**Box 1**). Their cohort included 721 children attending school clinics, recognizing the existence of 3 groups: (1) children with "ill-defined pains," vaguely distributed symptoms both daytime and nighttime; (2) the largest group of children, with "diurnal fatigue pains," whose pain was associated with "emotional disturbance" and postural defects including flat feet, pain being brought on by activities; and (3) the true "paroxysmal nocturnal pains" group, without

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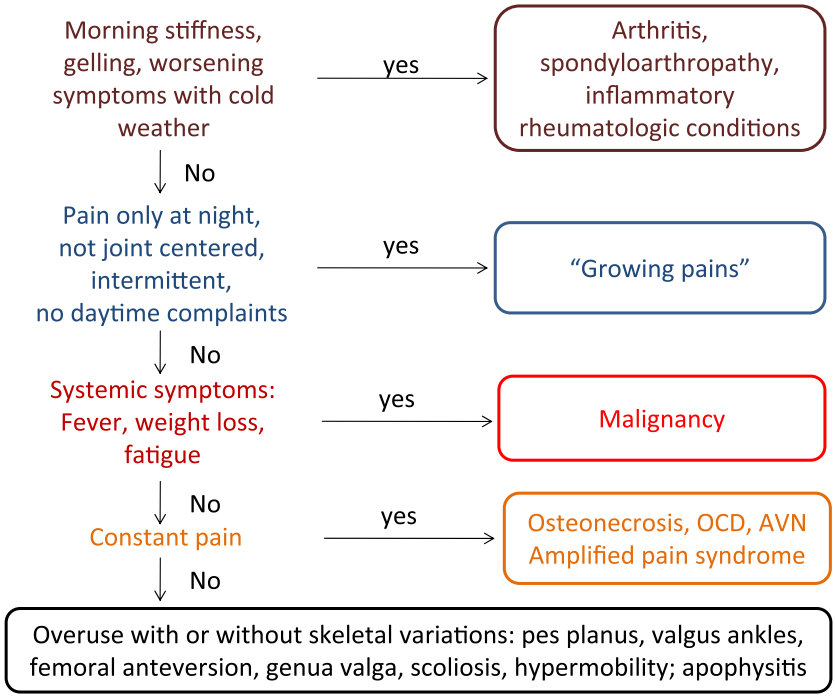

Fig. 1. Musculoskeletal pain decision tree. AVN, avascular necrosis; OCD, osteochondrosis dissecans.

association with daily activities but with the presence of similar symptoms in 20% of parents, and without any obvious etiology.

To this day, the etiology remains unknown. A link with restless leg syndrome has been suggested by Rajaram and colleagues,[4] but the concomitant diagnosis of growing pains differed slightly from the criteria by Naish and Appley, the sample size was low (10 children), and some of the children listed had daytime symptoms as well. Limb pain seemed to get better on moving the extremities, which is characteristic for restless leg syndrome but not for growing pains. Hashkes and colleagues[5] showed no association with vascular perfusion changes in affected areas, but there

Box 1
Criteria for the diagnosis of growing pains (based on Naish and Apley[3])

1. At least a 3-month history of pain
2. Intermittent pain with symptom-free intervals of days, weeks, or months
3. Pain late in day or awakening child at night
4. Pain not specifically related to joints
5. Pain of significant severity to interrupt such normal activity as sleep
6. Normal physical examination, laboratory data, and roentgenograms