

## Growing Pains in Children: Over Diagnosis?

Mitali Borgaonkar<sup>1</sup>, Santosh Kondekar<sup>2</sup>, Prachi Gandhi<sup>3</sup>, Surbhi Rathi<sup>4</sup>

<sup>1</sup>Third Year Resident <sup>2</sup>Associate Professor <sup>3</sup>Lecturer <sup>4</sup>Professor and Head of Unit, Department of Pediatrics, Topiwala National Medical College & B.Y.L. Nair Charitable Hospital, Mumbai, Maharashtra 400008, India.

### How to cite this article:

Mitali Borgaonkar, Santosh Kondekar, Prachi Gandhi, et al. Growing Pains in Children: Over Diagnosis? *Pediatr Edu Res.* 2020;8(1):39–41.

### Abstract

*Background:* Growing pains being episodic benign pains are often over diagnosed and under evaluated. *Case Characteristics:* A 4-year-old girl presented with complaints of frequent intermittent knee joint pain especially nocturnally. Serum profile studies were within normal limits. Ultrasound of both knee and hip joint was normal. MRI of right knee showed patellar osteitis with retropatellar serositis. *Outcome:* A short course of oral steroids resulted in symptomatic relief within 3 days where a treatment for 4 months with NSAIDs could not provide major relief.

**Keywords:** Growing pains; Retropatellar serositis; Kohler's disease; Naish and Apley diagnostic criteria.

### Introduction

Growing pains are typically intermittent, nocturnal and poorly localized, usually experienced in the lower extremities. Children suffering from 'growing pains' are characteristically well without any physical problems, despite severe pain experienced in the night. The usual age group is 4–14 years with equal gender preponderance.<sup>1</sup> Here we discuss a case suspected to be one of growing pains but was later diagnosed as Kohler's disease.

### Case Report

A 4 year-old girl presented with the complaint of intermittent pain in the right knee especially in the night between 2 and 4 am. These episodes

occurred once a week in the beginning; but over the month she had daily episodes of knee pain along with tenderness and restriction of movement with inability to walk and squat mainly during the painful bout. She was symptomatically better during daytime with no reason to skip school or day-to-day activities, yet she refused to run or climb stairs without support. Within a month a similar complaint of pain was also noted in the left knee with intermittent episodes and worsening late at night requiring analgesics for relief.

During this course, she was evaluated by the pediatricians and orthopedists as a case of growing pains. Counseling for benign nature of the disease and weekly follow-up was done. As the pain lasted for more than 3 months, the child was investigated for calcium, vitamin D, rheumatic profiles and MRI of both the knees. The investigations revealed

---

**Corresponding Author:** Santosh Kondekar, Associate Professor, Department of Pediatrics, Topiwala National Medical College & B.Y.L. Nair Charitable Hospital, Mumbai, Maharashtra 400008, India.

**E-mail:** drkondekar@gmail.com

**Received on** 23.12.2019, **Accepted on** 03.02.2020

the serum profiles to be within the normal limits. However, the MRI displayed retropatellar serositis. On further evaluation by a Rheumatologist the diagnosis of Kohler's disease was made.



**Fig. 1:** MRI of knee joint of the same girl s/o of retropatellar serositis.

The child had symptoms lasting for 4 months during which paracetamol and naproxen medication were given along with calcium and vitamin D supplements; which however could not provide major relief. At the end of 4 months, considering the diagnosis as reactive osteitis, a short course of oral steroids was started giving the patient symptomatic relief within 3 days.

## Discussion

Kohler's disease is a self-limiting disease characterized by avascular necrosis (AVN) of primary or secondary centers of ossification; classically involving navicular bone but cases involving other bones such as patella have also been reported.<sup>2-4</sup> It is known to have intermittent painful episodes. While growing pain is accepted as a clinical entity, it is a diagnosis of exclusion. The unawareness of a diagnostic criteria often hides the underlying pathology. In our case the term 'growing pains' has been applied mistakenly which misdirected from evaluating in detail a case that happens to be of Kohler's disease.

Kohler's disease shows the following classical features.<sup>5</sup>

- Osteochondrosis due to avascular necrosis of the navicular bone.
- Presents with pain and swelling in the middle part of the foot and usually limps as a result. Patients that walk with a limp tend to walk with increased weight on the lateral side of the foot.
- Tenderness over the navicular and often complain of pain over the apex.

In this case, it involves the patella instead of navicular bone indicating transient patellar osseitis.

Even though growing pains is one of the most common cause of musculoskeletal pains, there is a danger of over diagnosis. The inclusion and exclusion criteria for growing pains should be considered before making a definitive diagnosis in favor of it.

## Conclusion

A high degree of suspicion for diagnosis of other entities should be considered when the pain involves joints and bones. The Naish and Apley diagnostic criteria<sup>6,7</sup> specifically points towards growing pains by outlining basic prerequisites such as intermittent lower limb pains for a period of at least 3 months, not specifically located in the joints, and of sufficient severity to interrupt sleep (Practitioners' dilemma). Peterson provided with a definition for better clinical practice, it consists of inclusion and exclusion criteria (Practitioners' dilemma).<sup>8</sup>

Growing pains is in reality a clinical diagnosis without the need for laboratory investigations or X rays and scans; yet not simply muscular pain but pain in the joint should always be investigated for other diagnoses.

**Key message:** A high index of suspicion for other diagnoses should be considered when the pain involves joints and bones.

## References

1. Uziel Y, Hashkes PJ. Growing pains in children. *PediatrRheumatol* 2007 Apr 19;5(1):5.
2. Pinar H, Gül O, Boya H, et al. Osteochondrosis of the primary ossification center of the patella (Köhler's disease of the patella) report of three cases. *Knee Surg Sports Traumatol Arthrosc Off J ESSKA* 2002 May;10(3):141-3.

3. Dharamsi AS, Carl RL. Bilateral Osteochondrosis of the Primary Patellar Ossification Centers in a Young Athlete: A Case Report. *Clin J Sport Med* 2014 Jan;24(1):80-2.
  4. Suresh SS, Orth MS, Orth MC. Kohler's disease of the patella. *JBR-BTR Organe Soc R Belge Radiol SRBR Orgaan Van K Belg Ver Voor Radiol KBVR* 2012 Apr;95(2):106.
  5. Alhamdani M, Kelly C. Kohler's disease presenting as acute foot injury. *Am J Emerg Med* 2017 Nov;35(11):1787.e5-1787.e6.
  6. Naish JM, Apley J. "Growing Pains": A Clinical Study of Non-Arthritic Limb Pains in Children. *Arch Dis Child* 1951 Apr;26(126):134-40.
  7. Mohanta MP. Growing pains: Practitioners' dilemma. *Indian Pediatr* 2014 May;51(5):379-83.
  8. Peterson H. Growing pains. *Pediatr Clin North Am* 1986 Dec;33(6):1365-72.
- 
- 
-