

Haematoma, soft tissue, or bone tumor? Differential diagnosis of an iliac crest mass in a child

Krzysztof Solecki ^{1,D} , Krzysztof Miklaszewski ^{2,F}

1 Saint Lukas Hospital, Tarnów, Poland

2 Department of Pediatric Surgery, Jagiellonian University College of Medicine, Kraków, Poland

A – Research concept and design, B – Collection and/or assembly of data, C – Data analysis and interpretation, D – Writing the article, E – Critical revision of the article, F – Final approval of the article

Abstract

A differential diagnosis of a right iliac crest mass in a 15-year-old boy is shortly discussed. The importance of cancer awareness and adequate diagnostic procedures are underlined.

Keywords: sarcoma, children, differential diagnosis

Introduction

Sarcomas originate in the bone or soft tissue and constitute about 20% of all solid malignancies in children. Bone sarcomas represent 10% of this number and pelvic girdle is the site of the disease in some 15% of cases [1]. The cornerstone of treatment is a margin-free surgical resection with neoadjuvant or adjuvant treatment depending on the histopathology report [2]. Patients with pelvic sarcomas tend to present at advanced stages of the disease and at the time of diagnosis the tumor is relatively large [3]. This is not infrequently caused by delays in the correct treatment, which in turn is a result of a lack of cancer awareness in parents and – even more worryingly – in primary care physicians.

The clinical presentation

A 15-year-old boy was referred for a consultation due to a mass in the right iliac crest (Fig. 1). The mass had been noted 3 months previously, and since then it had been diagnosed as a post-traumatic hematoma; the boy was limping on his right leg. Clinical examination revealed a large unmovable mass strictly related to the pelvis. A simple X-ray revealed multiple exostoses and popcorn calcification of the right iliac wing (Fig. 2).

✉ Corresponding author: Krzysztof Solecki; email: krzsolecki@gmail.com

The patient was immediately referred for further staging and surgical resection.

Conclusion

Any pathological mass in the soft tissues or skeletal treatment must be suspected of malignancy and adequate diagnostic procedures should be implemented as soon as possible.



Fig. 1. A right iliac crest mass is clearly visible



Fig. 2. The right iliac crest mass is confirmed on X-ray

References

1. Hui JYC. Epidemiology and etiology of sarcomas. *Surg Clin N Am.* 2016;96(5):901–914, <https://doi.org/10.1016/j.suc.2016.05.005>.
2. Benady A, Gortzak Y, Sofer S, Ran Y, Rumack N, Elias A, Efrima B, Golden E, Segal O, Merose O, Sternheim A, Dadia S. Internal Hemipelvectomy for primary bone sarcoma using intraoperative patient specific instruments—the next step in limb salvage concept. *BMC Musculoskelet Disord.* 2022 Nov 24;23(1):1012, <https://doi.org/10.1186/s12891-022-05918-1>. PMID: 36424560; PMCID: PMC9685900.
3. Wurtz LD, Peabody TD, Simon MA. Delay in the diagnosis and treatment of primary bone sarcoma of the pelvis. *J Bone Joint Surg.* 1999;81(3):317–325, <https://doi.org/10.2106/00004623-199903000-00003>.