

Hematuria Revealing Pubic Bone Osteochondroma

Lina Belkouchi*

Department of Medicine and Pharmacy of Rabat, University of Morocco, Impasse Souissi, Rabat, Morocco

Corresponding author: Lina Belkouchi,
Department of medicine and pharmacy of
Rabat, University of Morocco, Impasse Souissi,
Rabat-10100, Morocco.
E-mail:belkouchilina@gmail.com

Abstract

Osteochondromas are benign bone tumors usually developed in long bones. They are mostly asymptomatic, discovered incidentally through imaging, but can also be rarely responsible of complications. Sometimes, their uncommon localization, pelvis bones for instance, may cause serious symptoms due to irritation or compression of adjacent organs. We report the case of a 65 years old male patient, admitted in our department for macroscopic hematuria, to which imaging confirmed diagnosis of pubis symphysis osteochondroma compressing the base of the bladder.

Keywords: Bone-tumor; Exostosis; Pelvis; Hematuria; Imaging

Introduction

Osteochondromas also called exostosis of the bone are common benign tumors frequently seen among long bones. They are usually asymptomatic and discovered incidentally unless they cause irritation to adjacent organs.

Localization in the pelvis bones is rare, and can seldom cause complications such as hematuria. We report the case of a 65 years old male patient, admitted in our department for macroscopic hematuria, to which imaging confirmed diagnosis of pubis symphysis osteochondroma compressing the base of the bladder.

Aim of the Study

A 65 years old male patient with no medical history record consulted for macroscopic hematuria. Clinical exam was normal. Biological tests showed a slight anemia with Hb=10 g/dL. With the patient's age, a bladder tumor was suspected at first. An abdominal ultrasound performed showed a voluminous bladder stone.

An abdominal CT-scan revealed a dense mass in the bladder in axial images and reconstructions showed compression of the bladder base by a voluminous right pubic symphysis exostosis also known as osteochondroma. Surgical removal of the tumor was performed, with regression of symptoms.

Discussion

Osteochondroma is the most common benign bone tumor; it represents 40% of benign tumors and 10% of primary bone tumors.^[1] It is formed by cortical and medullary bone that is created from an aberrant epiphyseal cartilage growing separately, covered by a cap that ossifies with age, creating punctate or nodular calcification, thus the name osteocartilaginous exostosis.^[2-4]

It has a male predominance, with a sex ratio of 2:1.^[5] And it is frequently solitary; the presence of multiple exostosis is seen in hereditary multiple exostosis.^[2] Its exact pathogenesis is not clear, but radiation induced osteochondroma cases have been reported before.^[4] Osteochondromas commonly affect the metaphysis of long bones, around the knee, the proximal part of the humerus, the tibia or fibula.

Pelvis bones are only affected in 5%-7% of the cases, and the pubic symphysis represents a rare localization.^[1,3] Their sizes vary between 1-10 cm, whereas, thickness of cartilage cap is usually <2 cm in adults and <3 cm in children.

These bone tumors are mostly asymptomatic discovered incidentally through imaging, with a 1%-2% incidence on radiographic evaluation.^[4] However, symptoms may occur if the tumor is voluminous causing local pressure or compression of adjacent organs, vessels or nerves, or if it is associated with a fracture.

In literature, only a few cases of symphysis pubis osteochondroma have been reported (7 cases in 2015's literature report by Gö kkuş et al.) and among them only two cases were revealed by hematuria.^[3]

Hematuria is mostly due to prostatic or bladder base compression. Imaging is essential for diagnosis, through X-rays, CT-scan or MRI, with CT-scan being the imaging of choice to confirm the diagnosis, showing a protruding cortex and marrow from a normal adjacent bone blending with it and containing an ossified cartilage cap.^[4,5] The base of the protrusion may be large referred to as sessile osteochondroma, or narrow named pedunculated

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

How to cite this article: Belkouchi L. Hematuria Revealing Pubic Bone Osteochondroma. Ann Med Health Sci Res. 2021;11:181-182

osteochondroma. This tumor is usually benign. However, malignant transformation, although very rare with an incidence of 1%, shouldn't be neglected. It develops in the cartilage cap of the exostosis, and it is more common in hereditary multiple exostosis. Localization of the lesions in the pelvis hips and shoulders are more prone to malignant transformation, and signs of malignancy should be evaluated, they include;^[2,4,6]

- Cartilage thickness exceeding 3cm in children and 2 cm in adults.
- Erosion of the adjacent bone.
- Soft tissue enhancement or mass associated.

When these tumors are small and asymptomatic, no treatment is required, but sometimes surveillance is needed to prevent chondrosarcoma transformation. Nonetheless, if symptomatic, surgical removal is necessary to relieve the symptoms and improve patient's life quality.^[3]

Conclusion

Osteochondroma is a common benign bone tumor, usually diagnosed incidentally through imaging. Sometimes, it can sometimes occur in rare localizations such as the pubic bone causing serious symptoms due to compression. CT scan is the

examination of choice for diagnosis and surveillance, allowing also an evaluation of malignant transformation.

References

1. Mnif H, Zrig M, Koubaa M, Zammel N, Abid A. An unusual complication of pubic exostosis. *Orthop Traumatol Surg Res.* 2009; 95:151-3.
2. Bacha D, Sassi A, Slama SB, Nefiss M, Gharbi L, Bouraoui S, Lahmar A. Solitary osteochondroma of the pubic symphysis of accidental discovery. *Pan Afr Med J.* 2019;32:74.
3. Song LC, Xu Q, Li H, Li ZH, Li Y, Qin YF, et al. Osteochondroma of the pubic symphysis causing hematuria: A case report and literature review. *BMC Urol.* 2021;21:1.
4. Murphey MD, Choi JJ, Kransdorf MJ, Flemming DJ, Gannon FH. Imaging of Osteochondroma: Variants and complications with radiologic-pathologic correlation. *Radiographics.* 2000;20:1407-34.
5. Phillips EE, Lee SH, Flannigan GM. Pelvic osteochondroma causing haematuria. *Br J Urol.* 1990;66: 99-100.
6. Gökkuş K, Atmaca H, Sağtaş E, Saylık M, Aydın AT. Osteochondromas originating from unusual locations complicating orthopedic discipline: Case series. *Eklemler Hastalıkları.* 2015;26:100-9.