

CASE REPORT

A singular case of polyorchidism

Giacomo Di Cosmo, Tommaso Silvestri, Stefano Bucci, Michele Bertolotto, Carlo Trombetta

Department of Urology and Radiology, University of Trieste, Italy.

Summary We report a case of polyorchidism, a rare congenital anomaly, frequently discovered by chance. At current knowledge is still not defined which is the best clinical and therapeutic approach as well the best follow-up scheme due to the unclear malignant potential and rate of complications if a conservative approach is used. MRI (Magnetic Resonance Imaging) seems to be a good method to discriminate this mass from others pathological findings but there is still not enough evidence to standardize the procedure.

KEY WORDS: Polyorchidism; Ultrasonography; Magnetic Resonance Imaging; Scrotal mass.

Submitted November 2016; Accepted 15 December 2016

INTRODUCTION

The histological finding of more than two testicles is called polyorchidism, a rare congenital anomaly with approximately 100 cases reported in the literature. Most of the reported cases were incidental findings but this condition may be related with genital symptoms and pathologies as hydrocele, varicocele, testicular malignancy and torsion. About 75% of cases are reported on the left side in the age range from 15 to 25 years (1).

CASE REPORT

A 45 years old man referred to our emergency service for acute bilateral scrotal pain, mostly on the left side, associated with nausea and vomit. At the visit the only evidence was painful palpation on both sides and a right testicle more cranially located in the emiscrotum. Additionally, eco-fast of the abdomen and scrotum was

performed revealing no signs of torsion. After the complete remission of the pain, patient went home and performed a second scrotal ecography with contrast that revealed an epididymus tail isoechoic mass measuring about 1.3 cm, with a hypo-echoic area inside, with an increased vascular signal and good wash-out. First hypothesis was adenomatoid tumour, for which the patient underwent surgery by right inguinal incision and excision of a soft, grey mass at the border between testicle and epididymis, soft at the palpation and with a macroscopical similarity with a cyst. Final histological exam revealed the presence of a supernumerary testis classified as type II in Leung classification (1) and type A3 in Bergholz classification (2).

DISCUSSION

This condition is a rare malformation believed to result from an abnormal division of the genital ridge and triorchidism is the most common type.

Depending on where the division occurs, a supernumerary testis will develop with either shared or individual vas deferens and epididymis.

Most of cases are incidental findings, painless, with a supernumerary testis sharing epididymis and vas deferens with the omolateral testis.

The rarity of right-sided histologically proven polyorchidism and the bilateral scrotal pain were the reason why we presented this case. Fundamental for diagnosis is the sonographic imaging or MRI for better soft-tissue resolution and contrast and evaluation of the reproductive potential of the accessory testis (3) that could determine the therapeutic approach.

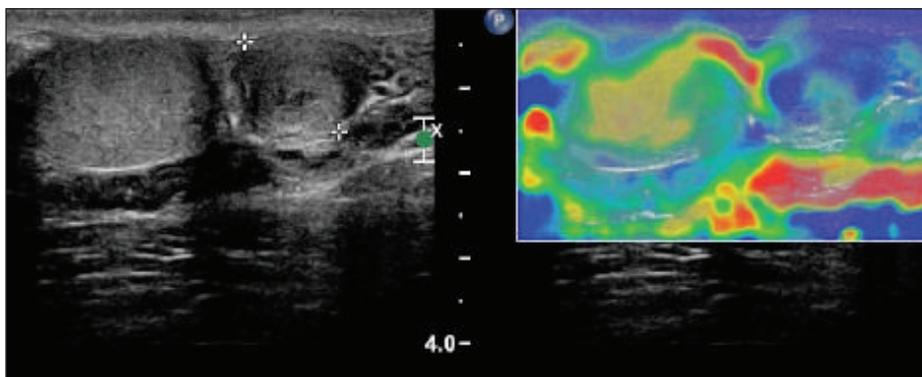


Figure 1.

In the left image we can clearly notice the mass on the right epididymis tail. On the right image we show the elastosonography performed during the second CEUS, that gave us a first information about the consistence of the mass.

CONCLUSIONS

Polyorchidism is a rare condition, occurring in about 50% of cases between the age of 15 and 25 years. Although rare, it should be considered in the differential diagnosis for intrascrotal masses by using sonography and MRI. Clinical management is still controversial and it depends on the supernumerary testis location, its relationship with the ipsilateral testis, its reproductive functionality and malignancy potential. In asymptomatic patients, with good reproductive function of the supernumerary testis it could be useful to follow-up by imaging.

REFERENCES

1. Leung AK. Polyorchidism *Am Fam Physician*. 1988; 38:153-6.
2. Bergholz R, Koch B, Spieker T, Lohse K. Polyorchidism: a case report and classification *J Pediatr Surg*. 2007; 42:1933-35.
3. Danrad R, Ashker L, Smith W. Polyorchidism: imaging may denote reproductive potential of accessory testicle. *Pediatr. Radiol*. 2004; 34:492-494.

Correspondence

Giacomo Di Cosmo, MD (Corresponding Author)
giacomo.dicosmo@gmail.com

Tommaso Silvestri, MD
tommaso.silve@gmail.com

Stefano Bucci, MD
urostef@yahoo.it

Michele Bertolotto, MD
bertolot@univ.trieste.it

Carlo Trombetta, MD
trombcar@units.it

Department of Urology, University of Trieste, Trieste, Italy