CASE REPORT

Polyorchidism: a torted right-sided supernumerary testis

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SUMMARY

Polyorchidism is a rare congenital anomaly defined by the presence of more than two histologically proven testes. The commonest variant is triorchidism, the supernumerary testis being commonly reported on the left side. Most cases of polyorchidism are found incidentally in association with undescended testis, hydrocele, hernia or torsion. We report a right-sided triorchidism in a 15-year-old boy found at time of groin exploration for an irreducible right inguinal hernia.

BACKGROUND

Polyorchidism is an uncommon congenital anomaly defined by the presence of more than two histologically proven testes.¹ The commonest variant is triorchidism, the supernumerary testis being commonly found on the left side.² Polyorchidism is mostly an incidental finding during surgery for undescended testis, hydrocele, hernia or torsion.³ To date, just over 100 cases of polyorchidism have been reported. We deem our case worth reporting due to two main reasons: rarity of right-sided triorchidism and associated torsion of the accessory testis.

CASE PRESENTATION

A 15-year-old boy, known asthmatic, presented acutely with a painful, intermittent right groin swelling for 3 days. On presentation, the right scrotum was erythematous with a reactive hydrocele and the ipsilateral testis was palpable in the right hemiscrotum. An attempted reduction was unsuccessful and a right groin exploration was planned for a presumed irreducible right inguinal hernia.

INVESTIGATIONS

Histology showed necrotic seminiferous tubules with no identifiable germ cells, confirming testicular infarction consistent with torsion of accessory testis. The cord-like structure seen macroscopically represented ductus epididymis, which appeared viable and the surrounding connective tissue also appeared to be viable. No evidence of malignancy was seen.

TREATMENT

At groin exploration, a discoloured mass was found in the right superficial inguinal pouch which on dissection turned out to be a torted, necrotic testis, epididymis and a tube-like structure resembling the vas deferens. A normal right testis was palpated in the right hemiscrotum with normal vas deferens and testicular vessels. The torted, necrotic accessory testis was excised.

OUTCOME AND FOLLOW-UP

Patient was well at follow-up; the right testis was clinically the same size as its counterpart, 3 months from time of surgery.

DISCUSSION

Polyorchidism, though a rare congenital anomaly, has been widely reported in the literature, with over 100 cases to date.³ Triorchidism, the most common variant of polyorchidism, is often left-sided in up to 75% cases¹ and diagnosed incidentally during surgery for undescended testis, hydrocele, hernia or torsion. Our case was diagnosed at surgery for presumed inguinal hernia.

The dilemma during surgery for polyorchidism is often centred on the fate of the supernumerary testis. The controversy is due to two divergent views: non-removal of the testis to maximise spermatogenesis versus removal of the testis to eliminate potential risk of malignancy. The fate of the supernumerary testis is often dependant on its viability: the non-viable accessory testis is often sacrificed. In our case, the supernumerary right testis was necrotic from torsion and had no vas deferens, aiding in our decision to excise the testis. Excision allows for removing the potential for the testis to undergo malignant change in future. We classified our case as B1, based on the classification proposed by Bergholz.⁴

Cases of polyorchidism associated with torsion of testis have previously been reported.^{5 6} de Buys Roessingh *et al*⁵ reported torsion of the left unduplicated testis, whereas Hwang *et al*⁶ reported a torted left accessory testis. However, to our knowledge, our case is the first report of the torsion of the rarer right accessory testis in polyorchidism.

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Learning points

- ▶ Torsion of accessory testis, though rare, can occur and mimic inguinal hernia in children.
- ▶ Preoperative imaging such as an ultrasound scan can be useful in diagnosing accessory testis, however, in emergency situations, may delay surgical exploration.
- ▶ The fate of the testis should be based on its viability: sacrificing the non-viable accessory testis while preserving those that are deemed viable for maximised spermatogenesis.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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