

UNDESCENDED TESTIS ASSOCIATED WITH INGUINAL HERNIA AND POLY ORCHIDISM: A RARE GENITAL ABNORMALITY

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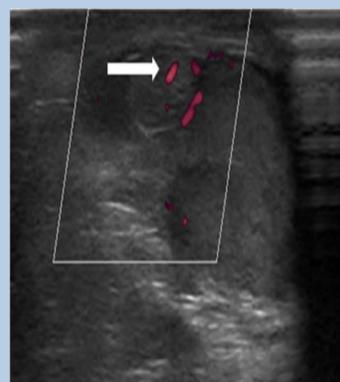
INTRODUCTION

- Polyorchidism is a rare anomaly with approximately 70 cases reported in literature .(1)
- In majority of cases, the patients are asymptomatic and have painless groin or testicular masses.(2)
- We are reporting a case of polyorchidism.

CASE DETAILS

- A 27 year old unmarried male presented with absent left testis with inguinal hernia.
- **Examination** revealed underdeveloped left hemiscrotum. A swelling of 2X1 cm was present in left inguinal region suggestive of left testis. Cough impulse was present.
- Right testis was normal.

INVESTIGATIONS



•**Ultrasound Abdomen-** hypoechoic lesion in left inguinal region of size 1.2X1 cm with few cystic areas within it, defect of 1.5 cm in left inguinal region with herniation of bowel.

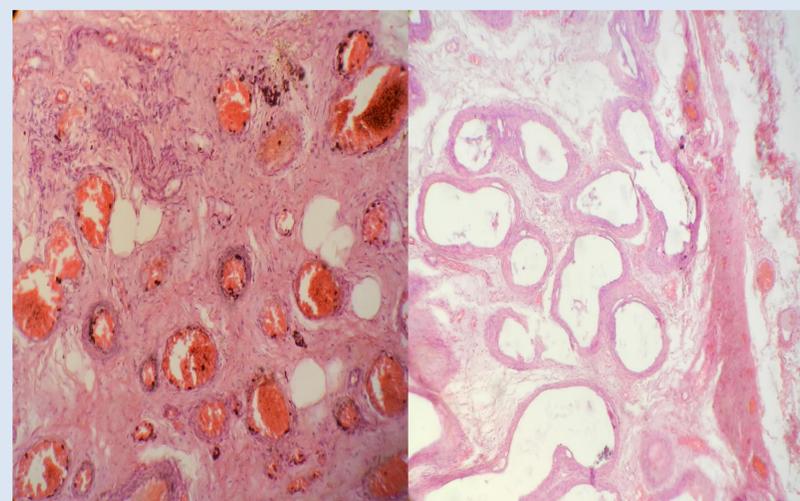
OPERATIVE DETAILS

Patient was planned for left Hernioplasty. On exploration of groin, rudimentary testicular tissue of size 1X1 cm with epididymis and ductus deferens was identified in region of superficial inguinal pouch. On opening the peritoneal hernia sac another testis with separate epididymis and vas was present



The rudimentary testis with vas was excised. Lichtenstein hernioplasty was done. Orchidopexy was performed for the other testis.

Microscopy – Atrophic testis with vas present.



DISCUSSION

The first histological description of polyorchidism was published in 1880 by Ahlfeld. The first clinical case was reported by Lane in 1895 [3].

Polyorchidism is a very rare anomaly, which is defined by the presence of more than two testicles. The exact etiology of polyorchidism is still unknown. However, it could be related to an embryological developmental abnormality during the formation of the testicles. Usually, patients present with an asymptomatic mass. However, **they are significantly prone to developing a testicular torsion and malignancy(4).**

Leung [5] and Singer and colleagues [6] classified embryonic polyorchidism into four types.

Type A: The supernumerary testicle lacks an epididymis and vas deferens

Type B: The supernumerary testicle shares an epididymis and vas deferens with another testicle

Type C: The supernumerary testicle has its own epididymis and shares the vas deferens with a regular testicle.

Type D: The supernumerary testicle has complete duplication of testicles, epididymides and vas deferens.

Polyorchidism is usually diagnosed on the basis of color Doppler ultrasound, further supported by magnetic resonance imaging (MRI) [7].

The management of polyorchidism should usually be resection of the dysplastic testicle without a duct; otherwise, the supernumerary testis should be retained and followed up by ultrasound yearly because of its contribution to spermatogenesis. However, any suspected malignancy of the supernumerary testicle should be managed by orchiectomy.(8)

Polyorchidism in general is an incidental finding associated with inguinal hernia, epididymitis, varicocele, torsion, retractile testes. Reports in the literature also have described an increased risk of testicular malignancy (6.4%) in the presence of polyorchidism .

Malignant transformation may occur regardless of the location of the supernumerary testicle. Most commonly reported neoplasms are embryonal carcinomas, germ cell tumors and seminomas. Extratesticular rhabdomyosarcoma and adenoma of rete testis in a supernumerary testicle have also been noted [9].

CONCLUSION

- Polyorchidism is a rare anomaly.
- Doppler ultrasound is the preferred method for evaluation, diagnosis and follow-up of this condition,
- Radiologists and urologists must be aware of this condition and should have a degree of suspicion when evaluating any inguinoscrotal swelling .
- Management is resection of dysplastic testicle due to risk of torsion and malignancy.
- Viable polyorchid testis with vas should be retained as it contributes to spermatogenesis.

References

1. Polyorchidism Arch Ital Urol Androl, 1997 dec;69(5): 319-22 Pubmed.
2. Triorchidism : an incidental finding Kundu et al J Anot. Soc. India 50(1) 37- 39 (2001).
3. Amodio JB, Maybody M, Slowotsky C, Fried K, Foresto C: Polyorchidism: report of 3 cases and review of the literature. J Ultrasound Med. 2004, 23: 951-957. 10.1016/j.clinimag.2012.03.006.
4. Arslanoglu A, Tuncel SA, Hamarat M: Polyorchidism: color Doppler ultrasonography and magnetic resonance imaging findings. Clin Imaging. 2013, 37: 189-191. 10.1016/j.juro.2009.07.063.
5. Leung AK: Polyorchidism. Am Fam Physician. 1988, 38: 153-156. [PubMedGoogle Scholar](#)
6. Singer BR, Donaldson JG, Jackson DS: Polyorchidism: functional classification and management strategy. Urology. 1992, 39: 384-388. 10.1016/0090-4295(92)90220-Q.
7. Yalçınkaya S, Şahin C, Şahin AF: Polyorchidism: sonographic and magnetic resonance imaging findings. Can Urol Assoc J. 2011, 5: E84-E86. 10.5489/cuaj.10077.
8. Bergholz R, Wenke K: Polyorchidism: a meta-analysis. J Urol. 2009, 182: 2422-2427. 10.1016/j.juro.2009.07.063.
9. Kharrazi SM, Rahmani MR, Sakipour M, Khoob S: Polyorchidism: a case report and review of literature. Urol J. 2006, 3: 180-183.