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Case Report

Cytodiagnosis of Polyorchidism- A Case Report of Rare Congenital Anomaly

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ABSTRACT

Polyorchidism is an urogenital curiosity defined as the presence of three or more testes. It is a very rare congenital anomaly with triorchidism being the most common presentation. Less than 100 cases have been reported in the world literature. We report one such interesting case of Polyorchidism in a 28-year-old male where Fine needle aspiration Cytology (FNAC) smears showed all the series of spermatogenic cells with normal maturation. Literature shows Polyorchidism is diagnosed usually by Ultrasonography (USG) but in the present study, the case was diagnosed by FNAC and subsequently confirmed by USG.

Keywords: Polyorchidism, Supernumerary testes, Cytodiagnosis, Fine needle aspiration Cytology

INTRODUCTION

Polyorchidism is an urogenital curiosity defined as the presence of three or more testes. It is a rare congenital anomaly with triorchidism being the most common presentation. [1] Less than 100 cases have been reported in the world literature. [2] Supernumerary testes may have scrotal, inguinal or abdominal location; they are more frequently on the left side. Polyorchidism is frequently associated with inguinal hernia, cryptorchidism and testicular torsion. [3]

CASE HISTORY

A 28-year-old unmarried male with a painless swelling in the right inguinal region of 6 months duration, was referred to pathology department for Fine Needle Aspiration Cytology (FNAC) with a clinical diagnosis of right inguinal lymphadenopathy. On palpation the mass was firm, mobile, non-tender and measured 2x1cms. FNAC was done using 23 gauge needle and both Giemsa and Papanicolaou stained smears showed moderate cellularity composed of spermatogonia, primary and secondary spermatocytes, spermatids and few mature spermatozoa. (Fig 1-4).

On confirming that both testes were palpable in the scrotal sac to rule out cryptorchidism, a cytodiagnosis of Polyorchidism was made.

Patient was further referred for ultrasonography (USG), which showed bilateral testis in the scrotum of normal size and a small hypoechoic mass in the right inguinal region of 1.5 x 1 cm having the

same echotexture as that of the testis. (Fig 5-6).

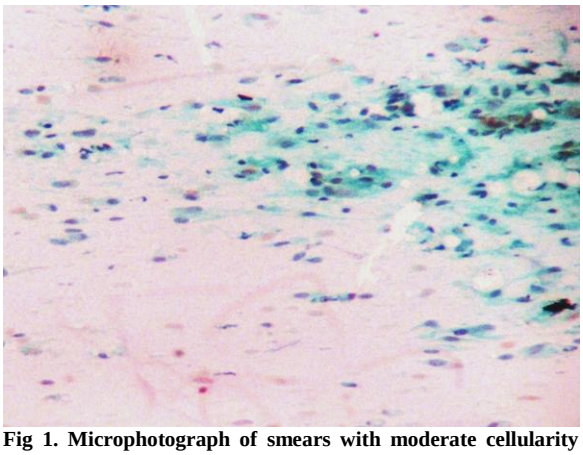

Fig 1. Microphotograph of smears with moderate cellularity showing polymorphic population of spermatogenic cells.(PAP. X100)

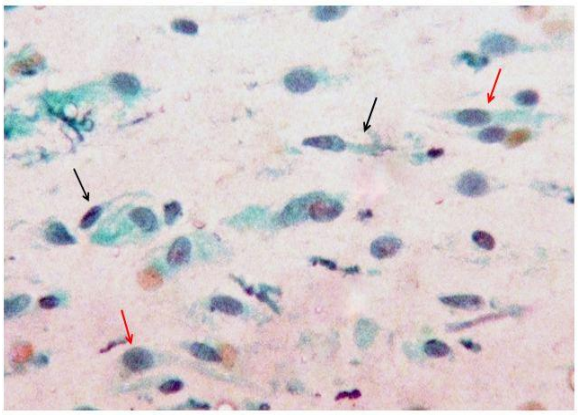

Fig 2. A closer view showing spermatocytes (Red arrow) and spermatozoa (Black arrow). (PAP.X400)

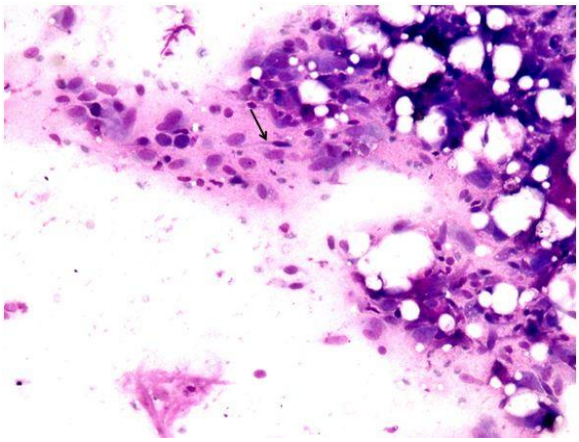

Fig 3. Microphotograph of primary, secondary spermatocytes, spermatids and arrow depicting Spermatozoa (Giemsa. X100)

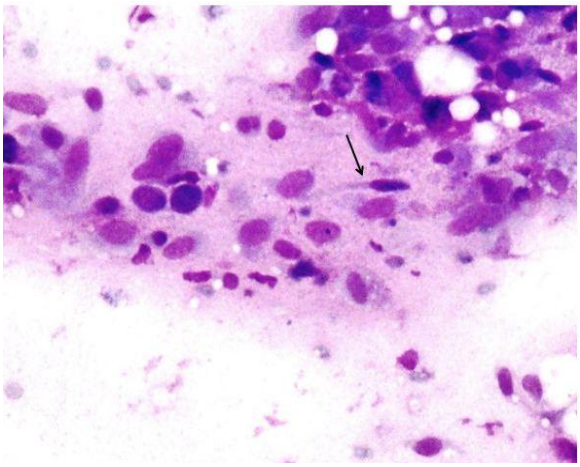

Fig 4. Microphotograph showing spermatocytes and mature spermatozoa (Arrow) (Giemsa.X400)

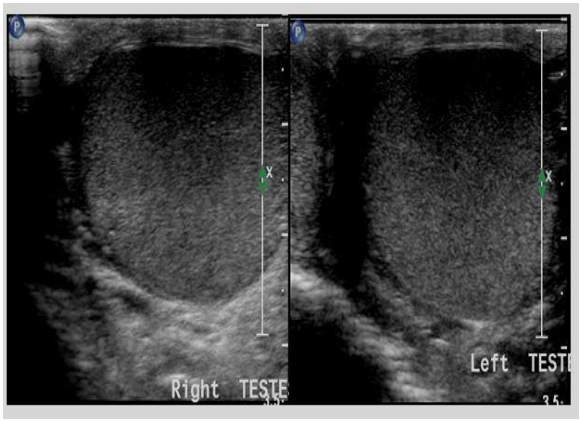

Fig 5. Ultrasonography of scrotum showing normal right and left testis

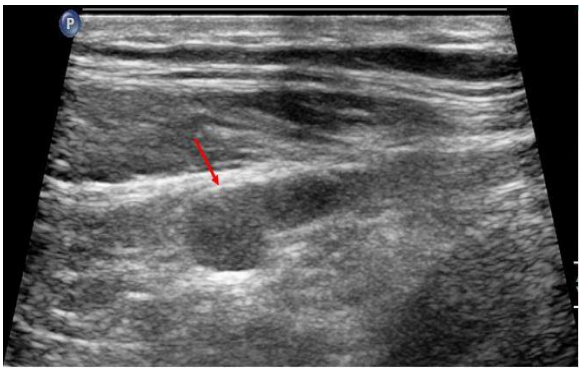

Fig 6. Ultrasonography of supernumerary testis in right inguinal region having the same echotexture as that of normal testis (Arrow).

The presence of supernumerary testis in the right inguinal region was confirmed.

DISCUSSION

Polyorchidism is an extremely rare congenital anomaly whose etiology remains

unclear. It is thought to be due to accidental longitudinal or transverse division of the genital ridge, with or without mesonephros, before the 8th week of gestational life, either through local accident or peritoneal bands. [4]

Sonmez et al in their study reported that most patients present with the age range of 11 to 25 years; a single and generally left-sided supernumerary testis is the common presentation, with scrotum being the most frequent location (66%). [3]

Kumar et al reported a case of triorchidism with torsion in a 72 year old man and explain that supernumerary testis is at an increased risk of torsion as it is retractile and more mobile. [5]

Malignancy has been reported in 6.4% of the cases, the most common being germ cell tumors. So a close follow-up is needed. [6]

Ghose et al conclude in their study that it is mandatory to search for accessory testis in patients who present with cryptorchidism in their childhood as it may be a site for ectopic seminoma. [7]

The mode of diagnosis is by USG. Biopsy or surgical intervention is done only if a suspected focus of malignancy is detected on sonography. [4,6]

In our case, the patient had supernumerary testis in the inguinal region and on the right side, which is extremely rare. Literature says that Polyorchidism is diagnosed usually by USG but in the present scenario, the case was diagnosed by FNAC and subsequently confirmed by USG. Since there were no associated complications, the patient is under close follow up every six months.

CONCLUSION

The diagnosis of Polyorchidism is incidental. Our case highlights the importance of a high index of suspicion amongst pathologists to the possibility of Polyorchidism while evaluating a solid extra testicular mass.

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