

Case Report

Classical Seminoma in Undescended Testes – Presentation at Extremes of Age

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Abstract

Cryptorchidism is a known risk factor for malignant germ cell tumours. Seminomas constitute the commonest histological subtype with the average age of presentation at 40 years. We report two cases of histopathologically proven seminomas at the extremes of age.

Key words: Testes, seminoma, undescended

Introduction

Pure seminoma constitutes to 50% of all testicular germ cell tumours. The average age for presentation of seminomas is 40 years and a smaller peak is also seen in childhood. They are rarely reported in the elderly.^[1] Cryptorchidism is considered to be the most common risk factor for testicular germ cell tumours. In the literature, approximately 10% of the cases are associated with past/corrected or present cryptorchidism.^[2]

Case report

A 65 year old male presented with an abdominal mass of one year duration. On physical examination the right testis was not palpable. Following clinical, sonological and CT evaluation the patient was diagnosed to have undescended testis. Alpha-fetoprotein (AFP) levels were 2.1 IU/ml (normal level < 10 IU/ml) and beta hCG levels 2mlU (0-2 mlU) were normal where as LDH levels was raised to 6240 U/l (240-480 U/l). Intraoperatively a mass measuring 13x10 cm was found in the pelvis with an

attached vas deferens. The surgically removed tumor mass measured 13 x 10 x 6.5 cm and weighed 54 g (Fig. 1.A). The outer surface of the mass appeared nodular with engorged veins and cut surface was yellow with haemorrhage and necrosis. Microscopy revealed a well-defined tumour with the cells arranged in sheets and groups separated by fibrous septa containing a lymphocytic infiltrate, along with large areas of necrosis (Fig. 2). Tunica and epididymis were found to be free while lymphovascular invasion was present. Histopathological diagnosis confirmed seminoma.

A 18 year old male presented with complaints of discomfort and mass in the right iliac fossa since two months. He was found to have bilateral undescended testis with penoscrotal hypospadias. After evaluation, laparotomy was performed and the right sided mass of size 8 x 4 cm with spermatic cord was removed and sent for histopathological evaluation. Sections studied from the right testis and from the left sided testicular biopsy showed features consistent with seminoma. Germ cell neoplasia in situ (GCNIS) was also seen. The mass was surgically removed successfully and the diagnosis was confirmed.

Discussion

Testicular neoplasms, which are mostly malignant, constitutes to around 1% of cancers

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Received 10th Jun 2016, Accepted 20th June 2016



Fig 1. A. Seminoma in the 65 year old patient

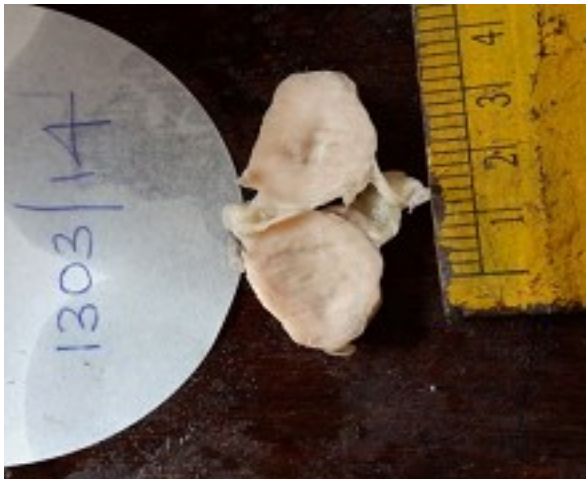


Fig 1. B. Undescended testis in the 18 year old patient

in males. Germ cell tumours account for 94-96% of all testicular tumours. Intratubular germ cell neoplasm is considered to be the precursor lesion of most invasive germ cell tumours. In patients with history of cryptorchidism, there is a 15-20% increased risk for development of GCNIS in the contralateral testis. Around 50% of patients with GCNIS progress to invasive carcinoma within 5 years or longer if orchiectomy is not performed.^[3]

Seminomas constitutes to 40-50% of all testicular germ cell neoplasms out of which 85-90% are of classic type. Around 5-8% of seminomas are reported in undescended testis. The most common age group of seminomas is 35-45 years and is relatively uncommon in men over 50 years and is rare in children. The usual clinical presentation is painless testicular enlargement with or without a hydrocoele. Around 10% of the patients may present with metastasis.^[4]

Macroscopically, the tumour is usually well demarcated, lobulated, firm grey, cream to pale pink homogeneous mass with or without areas of haemorrhage or necrosis. Microscopically, uniform and evenly spaced large tumour cells disposed in sheets, nests, cords and lobules separated by connective tissue septa with marked lymphocytic infiltrate are seen. Seminoma cells are round to polygonal with distinct cell membranes and clear cytoplasm (attributed to the presence of glycogen and/or

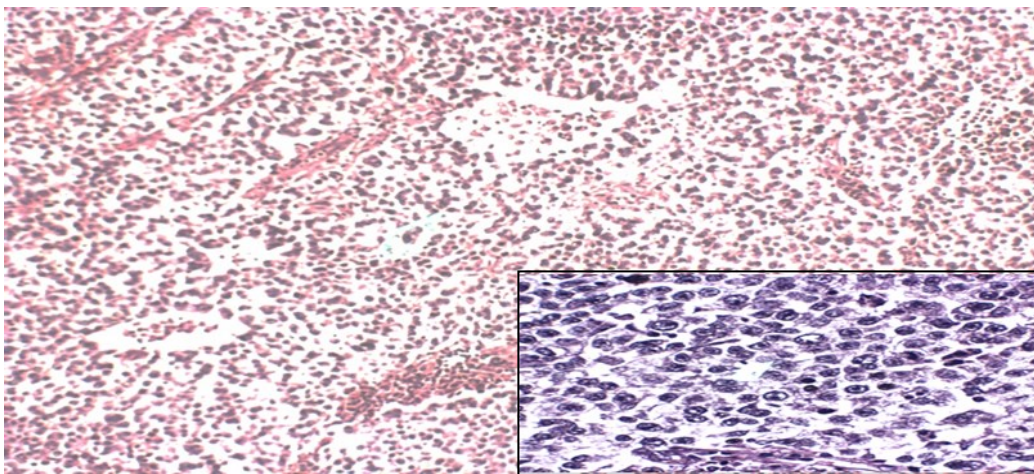


Fig 2. Microscopy of the tumor showing classical seminoma (H&E stain, 10x). Inlet showing the same cells in high magnification (H&E stain, 40x)

lipid). With placental alkaline phosphatase, the tumour cells display diffuse membranous or perinuclear dot like positivity in 85-100% of classical seminomas. CD 117 also has a similar distribution and incidence.^[5]

Both the cases reported here had a history of undescended testis and presented at the extremes of age. The young male aged 18 years had bilateral seminomas in the undescended testis. Malignant germ cell tumours may present in cryptorchid testis both in elderly patients and even among those aged under 30 years. Hence screening by performing assessment of serum tumour markers, sonography and biopsy in select cases are strongly recommended in cryptorchidism to prevent any diagnostic delays and for timely treatment. Negative findings in patients of cryptorchid testis under 45 years does not eliminate the risk of development of malignant germ cell neoplasms at a late age.

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