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A rare case of scrotal haematoma-unusual presentation of a classical testicular seminoma

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ABSTRACT

Testicular seminomas are one of the most common solid, extra-abdominal tumours in young males. The most common clinical symptom is a hard, painless mass in the scrotum that may or may not cause discomfort. We report a very rare case of incidental testicular seminoma presenting itself as a hematoma diagnosed after surgical intervention for chronic hydrocele and subsequent orchidectomy and partial scrotectomy done for parenchymal damage.

Keywords: Scrotal surgery, scrotal hematoma, testicular mass, scrotal exploration, testicular seminoma

1. INTRODUCTION

Testicular malignancies are rare conditions, accounting for approx. 1% of all malignancies worldwide. The most common age group is 15 to 45 years (Park et al., 2018; Bokhari et al., 2022). The incidence in India is among the lowest worldwide, accounting for 1.7% of the total number of cases (Shanmugalingam et al., 2013). The highest incidence rates have been recorded in western countries like Denmark and Norway, measuring 5.5/100000 man-years with the odds of survival being up to 10 years (Trabert et al., 2014). Clinical examination of such cases is often limited to scrotal mass with or without discomfort in its early stage or in metastasis. Rarely do these cases present themselves as chronic hydroceles or hematoma in non-violated testis, hence, presenting a case of a 43-year-old male patient with a classical history of chronic hydrocele, intra-operative diagnosis of testicular hematoma and histopathological report suggestive of classical seminoma.

2. CASE PRESENTATION

A 43-year-old male patient presented with a right-sided scrotal swelling with minimal discomfort for the last two years with no previous history of trauma. The swelling was evaluated, which showed a negative trans illumination and fluctuation test. Scrotal ultrasound gave the diagnosis of chronic hydrocele (Figure 1).

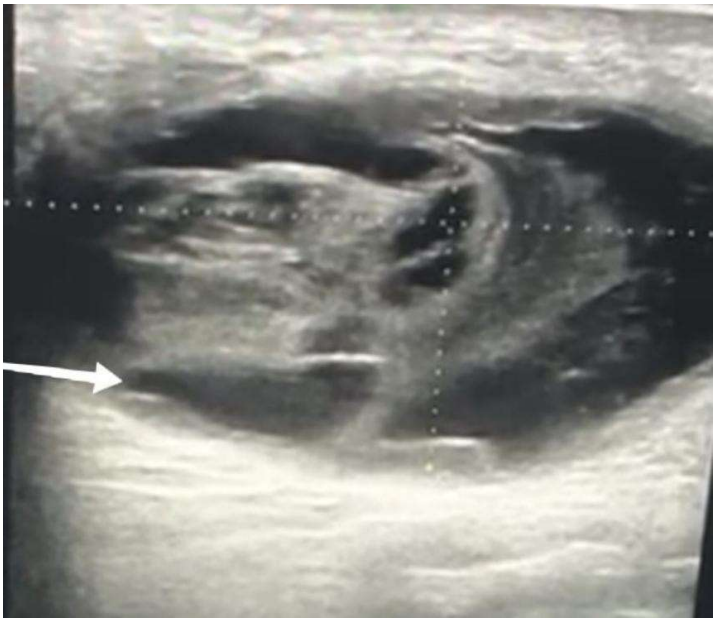

Figure 1 Ultrasound image suggestive of multiple septations with internal debris with complex fluid collection surrounding the right testicle

The patient was taken for surgery; the swelling was surgically explored. There was an active hematoma with a collection of approximately 400 ml of clotted blood which was surgically drained. Multiple active bleeding sites were noted. Testis was unremarkable and an adherent mass was found underlying the non-viable tissue (Figure 2). Orchidectomy and partial scrotectomy were done with the drain kept in situ. There were no complications in the post-operative period and the drain was removed on post-operative day 5. The histopathological report was suggestive of classical seminoma. The patient was scheduled for a follow-up after one week for wound assessment and further management. On further follow-up, complete recovery without any complications was noticed and the patient was planned for chemo radiation after a tumour board discussion.

Figure 2 Intra-operative image showing non-viable testis with multiple active bleeding sites

3. DISCUSSION

Literature defines seminoma as a malignant germ cell tumour arising from the testicular germinal epithelium and originating from precursor spermatogonium cells. About 5% of these tumours develop from extra gonadal sites, such as the anterior mediastinum,

retro-peritoneum, lungs and pineal gland (Harvey et al., 1938). For testicular cancers, ultrasound has a specificity of 95-99.8% and sensitivity of 92-98%. When paired with a physical examination, its sensitivity is around 100% (Augustin et al., 2022). Our patient's ultrasound report suggested an extensive scrotal collection containing internal debris and septations, possibly compressing the testis, which was not visualised clearly. Trans-scrotal intervention, scrotal haematoma, which might occur as a result of venous rupture, injury to vas deferens or less commonly, testicular rupture or any kind of scrotal violation, can impact tumour advancement. Rarely do such cases have a non-significant history (Foell et al., 2007; Capelouto et al., 1995). The disease diagnosis was made according to USG and tumour markers which are critical for testicular cancer detection and treatment. LDH-1 is expressed on chromosome 12p and is found in germ cell tumours. In our case, the LDH levels were significantly higher, although B-HCG and AFP levels were within the established range. In many instances of germ cell tumours like choriocarcinomas and seminomas, AFP and B-HCG levels are measured (Eyben, 2003). Choriocarcinomas and about 15% of seminomas, typically express B-HCG. In situations of pure seminoma, AFP is never elevated (Milose et al., 2011). As per the literature, 95% of cases of testicular malignancy detected are treated with surgeries involving high inguinal orchidectomy. Foell et al., (2007) described primary therapy as a high inguinal orchidectomy, allowing accurate tumour staging and histological diagnosis (Figure 3, 4).

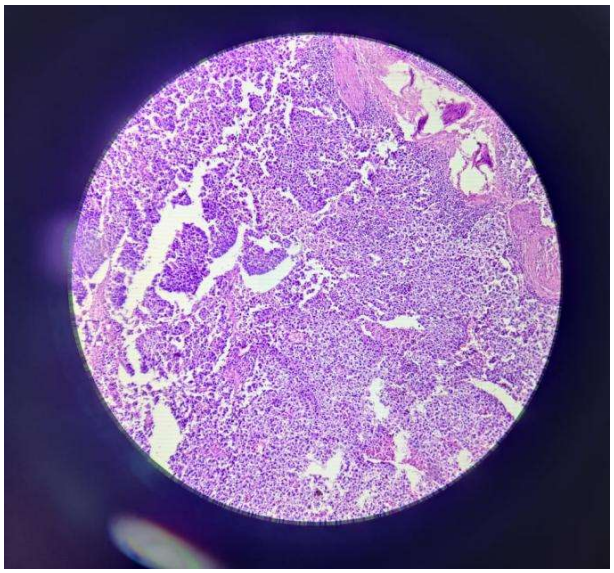

Figure 3 10X Histopathology Slide showing Uniform Cells with Few Fibrous Septae along with Inflammatory Cells

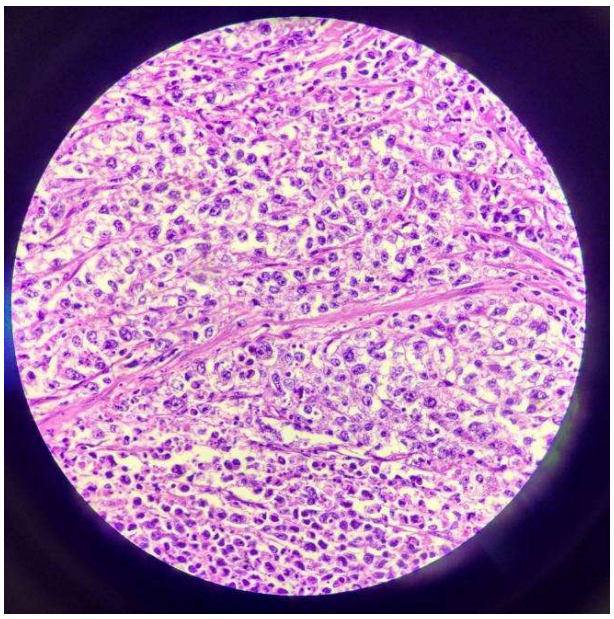

Figure 4 40X Slide Showing Lobular Configuration of Tumor Cells with Fibrous Spetae and Presence of Intercellular Odema and Lymphocytic Infiltrate

Seminomas typically present as a homogenous, hypoechoic, well-defined, intra-testicular, round-to-oval mass that lack local invasion compared to healthy testicular tissue. It rarely spreads to the para-testicular structures. Internal blood flow can be seen on colour Doppler. Non-seminomatous germ cell tumour, which appears heterogeneous is the main differential and is frequently associated with calcifications and cystic lesions (Marko et al., 2017). Though reported less, the recurrence of seminoma after surgical intervention usually involves sites such as the inguinal region, pre- and para-aortic lymph nodes, brain, lungs and liver, with a simultaneous increase in the biological serum markers. A literature review has shown that incidental malignant tumours are more commonly seen with cases of testicular rupture. Table 1 shows cases of testicular rupture in the last 60 years with a histopathological diagnosis of seminoma.

Table 1 Literature published in the past years reporting an association between scrotal violation and malignancy

Author Name & Year	Preoperative Diagnosis	Preoperative Radiological Diagnosis	Histopathological Report
Luchey et al., (2009)	Testicular trauma	Ruptured testis	Mixed Giant cell tumor
Cassie, (1956)	Testicular trauma	Hematocele	Seminoma
Cutajar, (1972)	Testicular pain and swelling	Torsion testis	Teratoma
Liu et al., (2001)	Testicular swelling	Neonatal torsion testis	Mature cystic teratoma
La-Montagne, (2002)	Testicular swelling	Ruptured testis	Predominant yolk sac malignancy

No cases have been recorded in literature like our current case where the scrotal violation has not been reported, thereby establishing the case's uniqueness. Seminomas respond well to chemotherapy & radiotherapy; hence the curative percentage is much higher than other malignancies. The prognosis for such patients is classified as per the international germ cell cancer collaborative group risk classification. Adjuvant therapy involves a multimodal approach depending on the staging (International Germ Cell Consensus Classification, 1997). Cisplatin-based chemotherapy and radiotherapy are effective; however, radiotherapy is preferred due to its lower reoccurrence rates. Follow-up protocol includes CT brain and abdomen-pelvis, Chest X-ray, tumour markers and clinical examination.

4. CONCLUSION

This case report corroborates with the rarity of the atypical findings of a classical testicular seminoma in a chronic hydrocele patient. In this instance, the need of proper clinical history, examination and diagnostic methods in diagnosing a testicular tumour is also emphasised.

Author's contribution

Dr Dhaval Patel: Data collection, Manuscript writing and editing.
Dr Yeshwant Lamture: Manuscript review and editing.
Dr Nidhi Pugalia: Manuscript review and editing.

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We thank the participants who were all contributed samples to the study.

Informed consent

Written & Oral informed consent was obtained from the participants included in the study.

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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