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Journal homepage: www.ijpo.co.in**Case Report****Double malignancy of prostate and testis: A rare case report****Sunil Gokhroo¹, Simranpreet Singh Kahlon^{1*}**¹Dept. of Urology, R.N.T. Medical College, Udaipur, Rajasthan, India**ARTICLE INFO***Article history:*

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ABSTRACT

Prostate cancer rarely metastasize to testis and it is even rarer to find double malignancy involving prostate and testis. In an unusual case of high grade prostate cancer, intratubular seminoma was found in one of the testis of the patient after both testis were biopsied. He underwent bilateral orchidectomy as part of androgen deprivation therapy for high grade prostate cancer. It is important for physicians to be aware of such surprise.

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For reprints contact: reprint@ipinnovative.com**1. Introduction**

Prostate cancer is the second most common cancer diagnosed among men worldwide.¹ It is very rare to find a second malignancy of testis along with prostate cancer. This case report presents a unique instance of a 75-year-old male diagnosed with high-grade prostate cancer who, upon undergoing bilateral orchidectomy for androgen deprivation therapy (ADT), was found to have intratubular seminoma in one testis. Given the scarcity of such cases, this report underscores the importance of considering testicular malignancy in patients with prostate cancer, even in the absence of clinical suspicion. Intratubular seminoma which comes under the category of Intratubular germ cell neoplasia (ITGCN) is a precursor lesion for invasive germ cell tumor.²

2. Case Report

A 75 year-old man presented to outpatient department with history of recurrent retention of urine. He is a 20-pack/year smoker with history of medically managed hypertension and diabetes mellitus. His physical exam was normal and the digital rectal examination revealed

grade-2 hard prostate. Serum PSA level was 36.9 ng/ml (≤ 6.5 ng/ml).³ Ultrasonography showed 88 cc prostate with altered echotexture (Figure 1).

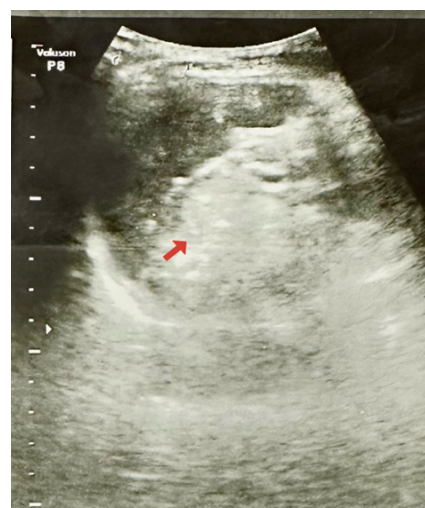


Figure 1: Ultrasonography showed altered echotexture of prostate gland

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Prostatic biopsy revealed a Gleason score 9 (4 + 5) adenocarcinoma (Figure 2 A, B). Chest and abdominopelvic CT was normal. Bone scan was also normal. After discussion about treatment options with the patient and his family members, bilateral orchidectomy was done through scrotal incision as part of ADT and watchful waiting was advised as further plan for management of prostate cancer.⁴

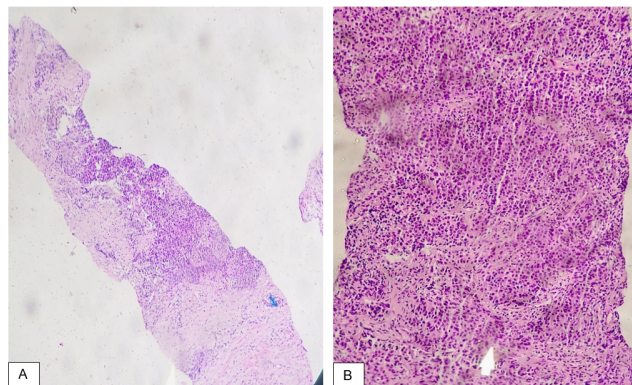


Figure 2: A, B): Prostatic adenocarcinoma; Histopathological examination of prostate core needle biopsy showed prostatic adenocarcinoma with Gleason's score (4+5), (H&E, 40x & 100x)

Biopsy of testis revealed intratubular seminoma in one of the testis (Figure 3 A, B). There was no other focus of malignancy and absence of any gross abnormality. No further treatment was advised as orchidectomy is curative for intratubular germ cell tumors.⁵

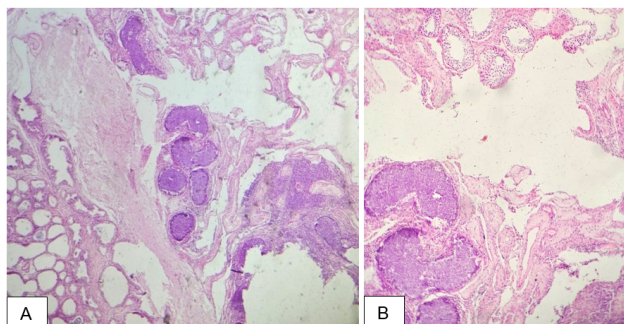


Figure 3: A, B): Intratubular seminoma; Histopathological examination of one of the testis showed intratubular seminoma (H&E, 40x & 100x)

3. Discussion

While the present case did not involve a metastatic spread of prostate cancer to the testis, it is essential to note that testicular involvement by prostate cancer, though rare, is a recognized entity. Incidence of testicular metastasis from prostate cancer can be up to 4%.⁶ These metastases often remain asymptomatic and are typically discovered incidentally during orchidectomy performed for advanced

prostate cancer.⁶

Intratubular seminoma, a type of ITGCN arises from abnormal persistence of gonocytes beyond the neonatal period that failed to mature into spermatogonia.⁷ They are the precursor lesion for invasive germ cell tumor.² It is a rare condition detected in less than 1% cases on autopsy and is unilateral in majority of the cases.⁷ It has similar risk factor profile as testicular cancers and carries risk of contralateral ITGCN in up to 5% cases.⁸ Diagnosis can be done by testicular biopsy and warrants biopsy of opposite testis to rule out bilateral disease. Treatment involves usually orchidectomy in small testis having unilateral disease or radiation therapy if the patient is young and hormonal function of testis is intact.⁵

4. Conclusion

The concurrent occurrence of prostate cancer and intratubular seminoma in a single patient is an extremely rare event. While the exact relationship between these two malignancies remains unclear, further research is necessary to elucidate potential shared risk factors or underlying mechanisms. Routine testicular examination and careful evaluation of testicular tissue during prostate cancer management may be warranted to increase the early detection of such rare but potentially significant associations.

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6. Conflict of Interest

The authors declare that they have no conflict of interest.

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