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Case Report

Adenosquamous carcinoma of prostate: An entity out of the ordinary

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ABSTRACT

Adenosquamous carcinoma (ASC) of the prostate is an extremely rare, aggressive histological subtype of prostate cancer. We report one such case here of a 73-year-old man with prostatic malignancy with a combination of squamous and glandular components. Immunohistochemistry with p40, AMACR and HMWCK corroborated the diagnosis of ASC. The squamous component being refractory, is better amenable to aggressive surgery, highlighting the importance of recognising this entity. Bony metastasis was not seen in this patient. Serum PSA was near normal.

1. Introduction

Primary ASC is a rare, intriguing and aggressive histological variant of adenocarcinoma of prostate that is detected on histopathological examination of the prostatic tissue. It arises in less than 1% of all prostate carcinoma cases, most commonly in the posterior and lateral parts of the peripheral zone.[1–3] Patients most commonly present with dribbling, increased frequency, haematuria and pain in abdomen.[2] Mostly seen in adenocarcinoma patients as a consequence of post androgen deprivation treatment, it has also been seen arising de novo, like in this patient. Squamous component is said to develop from squamous metaplasia of the acini and ducts.[4]

2. Case Report

A 73-year-old man presented with symptoms of urinary obstruction including dysuria, frequency of urination and dribbling. No signs of haematuria were present. Prostatomegaly was felt on digital rectal examination. Serum Prostate specific antigen (PSA) was 4.7 ng/ml (Normal: 0-4). Magnetic resonance imaging revealed a 74gm hyperplastic prostate with an intraprostatic lesion in the median lobe showing scattered cystic changes. Signs of left seminal vesicle infiltration were present.(Figure 1) Urinary bladder, lymph nodes, bone and other pelvic organs did not show any lesions. A prostatic needle core biopsy was done that revealed a malignancy with acinar component of Gleason score 4+4. In addition, a malignant component with obvious squamous features was seen admixing with the acinar component. The carcinoma was present in cores from bilateral peripheral and transitional zones. Perineural invasion was also noted. Seminal vesicle was not included in the biopsy.

Immunohistochemical analysis demonstrated alpha-methyl-Co-A racemase (AMACR) positivity in the glandular component and triple positivity for p40 (nuclear), AMACR (granular) and HMWCK (membranous and cytoplasmic) in the squamous component.(Figure 2)

The patient was lost to follow up post the diagnosis.

3. Discussion

The diagnosis of pure squamous carcinoma of prostate needs to satisfy these criteria: unequivocal

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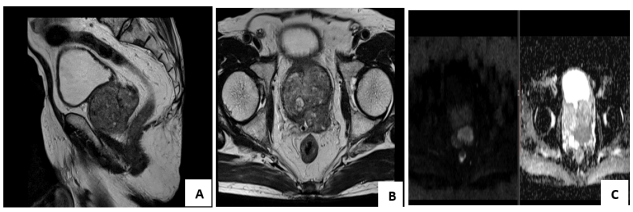

Figure 1: A): MRI showing enlarged prostate with median lobe enlargement; **B**): Left seminal vesicle infiltration; **C**): Scattered cystic change

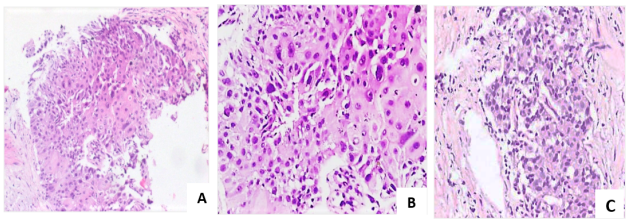

Figure 2: A-B): Squamous component in infiltrating nests, sheets; **C**): Glandular component with Gleason 4+4=8 (Hematoxylin & Eosin, 40x)

malignant features, obvious squamous differentiation, no adenocarcinoma component, no estrogen therapy and no primary squamous carcinoma in other sites. It is characterised by the presence of malignant squamous and glandular components with a high propensity to metastasize to pelvic organs like urinary bladder, lymph nodes and bones.This case had an adenocarcinoma component as well. Gleason score is only applied to the adenocarcinoma component and is not given for squamous component. Nonetheless, there is no significant difference in prognosis between adenosquamous and pure squamous carcinoma of prostate as both are equally aggressive.[2,4,5]

The other differential is spread of urothelial bladder carcinoma to prostate with squamous differentiation. There was neither a bladder lesion in this patient nor urothelial component on microscopy. The diagnosis of ASC can be complicated on needle biopsies when glandular component is not included while sampling and the infiltrating tumour volume is so huge that a decision as to origin from bladder or prostate is difficult.[4,5]

This patient did not show any evidence of metastasis in the said organs on imaging studies. Local invasion via direct spread can occur through seminal vesicles or bladder and rarely via the prostatic urethra. Serum PSA levels are normal to elevated further delaying the diagnosis and treatment and thus dismal prognosis. These carcinomas are highly resistant to radiation and chemotherapy.[3,6,7] The squamous component is quiescent and hence, therapy targeting rapidly proliferating tumour cells fail in this subtype. The best documented choice of treatment is aggressive surgery; however, the prognosis is generally dismal.[8] The average survival is 1-2 years post diagnosis.[2–4,8]

4. Conclusion

ASC of prostate is an extremely rare variant of prostate cancer. Histological identification of the squamous component aids to predict the refractory nature to conventional chemotherapy. Although literature on this subtype is limited, the best recommended treatment of choice is aggressive surgical intervention.

5. Source of Funding

None.

6. Conflict of Interest

None.

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