Neuroendocrine Cancer of the Prostate: Case Presentation

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**Intro:** Neuroendocrine Cancer of the Prostate (NEC) is a relatively rare but aggressive malignancy with unknown incidence and prevalence due to conflicting information regarding its pathogenesis. We describe a case of small cell neuroendocrine cancer of the prostate that presented to the clinic with a relatively uneventful presentation.

73 year old gentleman with a few months history of mild storage LUTS and ‘dry orgasm’. No medical history beforehand and urine tests done elsewhere by GP showed multi-sensitive culture and of E. coli and started on Ciprofloxacin by GP a few days prior with no improvement. PSA: 2.7 F/T 41% done prior to presentation. DRE showed very large and nodular hard prostate that is highly suspicious of cancer. Repeat PSA 1.24 and F/T 31.4%. Repeat culture was negative

**TRUS:** 127 g prostate with no PVR. Very nodular prostate with nodular infiltration of fat planes suggestive of a locally advanced primary disease of prostate. All biopsies are positive with a prostatic mixed carcinoma predominantly of small cell type neuroendocrine differentiation, morphologically and by immuno-stain. Occupying extensively almost all the biopsies. Only few foci of adenocarcinoma 3+3

**MP – MRI:** Metastatic prostate cancer bilateral involving the bladder, rectum, seminal vesicles, LNs pelvis and bone metastasis in pelvis.

**PET-CT Scan FDG:** Primary well demonstrated in prostate with invasion of the right seminal vesicle and right perirectal LN. Involvement of bilateral internal iliac LN and other pelvic LN. Distant metastases noted at level of T4 at right hilum. Metastasis in right ischium and right acetabulum.

**Treatment:** Referred to oncologist to start a chemotherapy regimen of carboplatin + etoposide. He was started on a-blockers by his GP and his LUTS improved slightly

**Discussion:** Small cell carcinoma of the prostate represents less than 1% of all prostate cancers. Most cases emerge after treatment with hormone therapy for advanced adenocarcinoma of the prostate which makes this one of the rare de novo cases. This disease entity poses a diagnostic challenge to urologists. Low threshold of suspicion is required for early diagnosis and treatment.

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