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Case report

TREATMENT OF URACHAL ADENOCARCINOMA — CASE REPORT

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Abstract: We report the case of a urachal adenocarcinoma diagnosed in a 55-year-old patient — presenting with dysuria and bloody urine. After admission to hospital, urethrocystoscopy showed large bleeding mass in prostatic part of urethra. He underwent transurethral resection of prostate and cystectomy, with implantations of JJ stents. Immunohistochemistry revealed urachal adenocarcinoma, a rare type of urogenital carcinoma, presented only in 5% of all cancer types. The patient was treated with dual modality, chemotherapy and radiotherapy.

Keywords: urachal adenocarcinoma, urethrocystoscopy, percutaneous nephrostomia, adjuvant chemoradiotherapy, PET CT.

INTRODUCTION

Urachal adenocarcinomas are rare tumors that likely arise from metaplasia of mucosal surface of prostatic part of urethra or from periurethral glands (1, 2). Other anatomic locations include pseudomembraneous, but also penile part of urethra (3). Anatomic location largely determines the hystological type of cancer. The incidence of adenocarcinoma is 5%, squamous cell carcinoma 80%, and transitional cell carcinoma 15% (4). Causes include chronic inflammation and venereal infections, most likely human papillomavirus. The rareness of these carcinomas represents a formidable diagnostic challenge because of a poor therapeutic benefit in advanced stages even with aggressive treatment.

CASE REPORT

A 55-year-old patient has been examined by urologist on July of 2012. due to pain in pubic area, dysuria and bloody urine, occasionally followed by urine retention. A clinical diagnosis of hypertrophic neoplasia of prostate was made. Within two weeks, patient was hospitalized because of the obstructive uropathy. The urethrocystoscopy was scheduled and it confirmed large, excessively bleeding mass in prostatic part of urethra that is prominent to the urinary bladder lumen. During hospitalization urgent CT scan was made, and it showed homogenous diverticulous area of 54 x 28 mm in the right lateral wall of the bladder and one on the left wall sized 20 x 14 mm, and enlarged prostate of 60 x 60 mm, with unclear differentiation to the seminal vesicles. Because of the massive haemorrhage, transurethral resection of prostate and cystectomy was made with implantations of JJ stents afterwards. On the first pathohistological review, the suspicion for prostate adenocarcinoma was made, but immunohistochemistry revision was requested, and it confirmed that it was urachal adenocarcinoma deriving from prostatic part of urethra. On the tenth postoperative day, MRI scan (Figure 1 and 2) was performed and showed earlier described areas on CT scan, but also neoplastic infiltrating area of 40 mm in the base of prostatic gland going through the right wall of the bladder, pointing at the rest of the tumor. In addition, right stent was removed, and percutaneous nephrostomy was placed due to right kidney hydronephrosis.

The case was presented to the multidisciplinary team, also Rete Oncologica of Italy-Torrino was consulted, and adjuvant chemotherapy (gemcitabin 2100 mg/D1, D8 Cisplatin 150 mg/D1 and 5-FU 2100 mg, Cisplatin 210 mg after progression) and radiotherapy (50 Gy/25 fr) were initiated, during which suprapubical cystostomy was done, resulting in significant clinical improvement within two months and patient's symptoms completely resolved. The patient remained

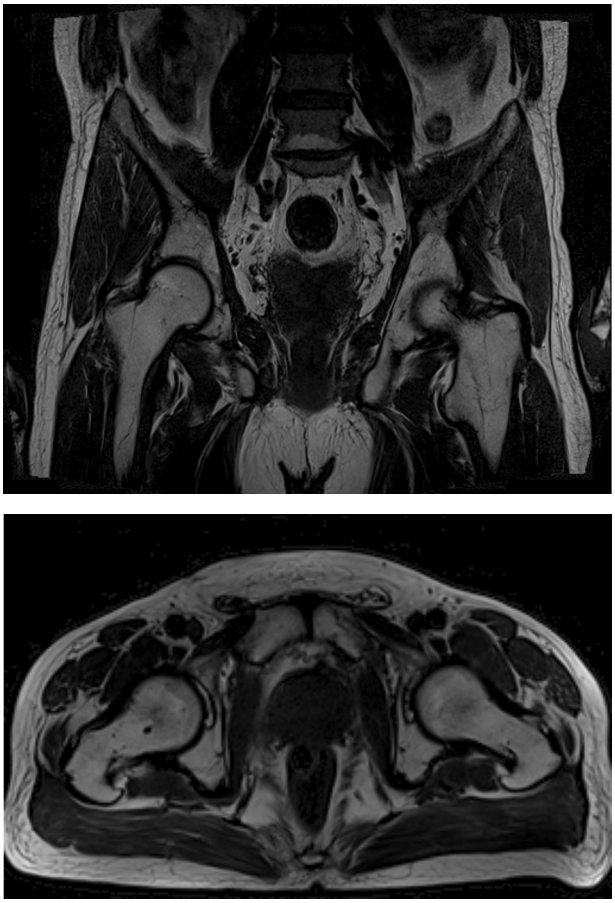

Figure 1 and 2. *Postoperative Magnetic Resonance Imaging of Pelvis (sagital and axial scans) (Department of Oncology and Radiotherapy Cantonal Hospital Zenica, BH)*

symptom-free after an adjuvant treatment and was discharged from the hospital. Scheduled reevaluation after two and half months was done and PET CT scan revealed mass of 47 mm infiltrating prostatic part of urethra in width of 28 mm, with diverticulous lesions on the right wall of the urinary bladder of 8 mm, significant retroperitoneal lymphadenomegaly and cystic lesion in 5th liver segment, with rectal abdominal muscle infiltration. Two years after the initial symptoms occurred, patient is in a great amount of pain, on daily opioid patches, has bilateral nephrostomies and on close follow-up protocol because there are no further treatment recommendations.

DISCUSSION

This case illustrates a potential of early recognition of this rare pathology which is critical to institution of appropriate therapy and prevention. Luckily, no missteps were taken, although there was a clinical mislead to prostate cancer because of symptom presentation. Eventhough right and aggressive treatment measures were taken, clinical and imaging techniques were all indicating aggressive disease and progression over such short period of time, but patient still has ecog of 2/3, two years after; in comparison to the median survival without treatment or with palliation, which is approximately 3 months.

Treatment recommendations for superfitial lesions (Tis, T1) is to be managed by transurethral resection, but such are rare (5, 6, 7). Invasive T2 tumours carries a poor prognosis in spite of radical cystoprostatectomy and total urethrectomy. A recent report stratified that extravesical involvement had much worse prognosis than intraurethral disease, with a higher chance of nodal involvement and 5-year survival of only 32%. Advanced carcinomas (T3T4N1-N3) is best treated with a combination of neoadjuvant chemotherapy (MVAC) followed by surgery and irradiation, but those data are consistent only for transitional cell tumours (7, 8). Preoperative MVAC against nontransitional types turned out to be ineffective. Radiotherapy yield poor results. Most common approach is external-beam radiotherapy of 50-60Gy over 6 weeks period. Patients who receive radiation therapy followed by salvage surgery seem to fare worse than if surgery was performed in an integrated fashion. Multimodal therapy with chemoradiation has shown the efficacy of 5-FU, mitomycin C, and cisplatin along with external-beam radiotherapy for squamous cell carcinomas but not for other histologic types (6–10).

CONCLUSION

Combining both modalities is expected to lead to a better outcome in treating urachal adenocarcinomas. In NCCN (National Comprehensive Cancer Network) guidelines there is no recommendation for further treatment because of a poor therapeutic benefit documented in clinical trial after adjuvant chemoradiation for advanced urachal adenocarcinomas.

There is no conflict of interests

Abreviations

PET — Positron Cmission Tomography
CT — Computed Tomography
MRI — Magnetic Resonance Imaging
5-FU — 5-fluorouracil
NCCN — National Comprehensive Cancer Network
MVAC — Methotrexate, vinblastine, doxorubicin, and cisplatin

Sažetak

TRETMAN URAHALNOG KARCINOMA — PRIKAZ SLUČAJA

Prikazali smo slučaj urahalnog karcinoma dijagnostikovanog kod 55-godišnjeg pacijenta koji se manifestovao dizurijom i pojavom krvi u mokraći. Nakon hospitalizacije ureterocistoskopija je pokazala veliku krvareću masu i prostatičnom delu uretre. Načinjena je transuretralna resekcija prostate i cistektomija sa implantacijom JJ stenta. Imunohistohemija je pokazala urahalni adenokarcinom, redak tip urogenitalnog karcinoma, koji čini samo oko 5% svih tipova karcinoma. Pacijent je lečen dualnim modalitetom, hemoterapijom i radioterapijom.

Ključne reči: urahalni adenokarcinom, uretrocistoskopija, perkutana nefrostomija, adjuvantna hemoradioterapija, PET CT.

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