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Post renal transplant urinary bladder squamous cell carcinoma

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Introduction

Schistosomiasis is still a major helminthes infection at the beginning of the 21st century and an important public health problem in many non-industrialized countries. As the second major parasitic disease in the world after malaria, schistosomiasis affects 200 million people, 800 million being exposed to the risk of infection. It is also estimated that 20 million individuals suffer from severe consequences of this chronic and debilitating disease responsible for at least 500,000 deaths per year.[1,2]

According to the Statistical Year Book of Ministry of Health in Saudi Arabia (2002), the mean prevalence of schistosomiasis in the Kingdom of Saudi Arabia (KSA) from 1990-2000 was 2.2/100,000. The highest schistosomiasis rates were recorded in Asser (39%), Jazan (27.6%), Bishah (16.3%), and Al-Bahah (9.8%). The least rate was recorded in Riyadh (0.2%) and Tabouk (0.2%). Both Najran and Al-Jouf reported no case. In addition, it is noticed that there is still ongoing transmission of infection in Jazan, Aseer and Al-Bahah as new cases are discovered among the young and middle-aged individuals.

Case report

We report a case of post renal transplant urinary bladder squamous cell carcinoma on top of schistosomiasis, a female patient aged 52 years from ASEER, south of Saudi Arabia, got living non related renal transplant 2015 her primary investigations showed anti schistosoma titer of 1/80, (all transplant candidate has to be tested for anti bilharzial titer as a protocol in our pre-transplant workup) urine analysis was negative for bilharzial ova and she was not having any symptom of active bilharziasis, she gave a history of bilharziasis during childhood for which she received full treatment, patient had a successful renal transplant in 23-May-2015 and was discharged with normal graft function on triple immunosuppression MMF Tacrolimus and Prednisolone. Patient continued on regular follow up in post transplant clinic with good graft function and mean creatinine level from 60-70 umol/L. On 24-April-2017 (about two years post transplant) patient presented to emergency room with the complaint of dysuria and recurrent hematuria she mentioned that this symptoms is there for the last 6 months, investigations showed normal renal function, Ultra Sound showed urinary bladder adequately distended showing a large lobulated hyperechoic, hyper vascular mass without mobility measuring 4.6x 3.3x6.2cm corresponding to the volume of 51.6ml along posterior and lateral walls. No stone is seen. MRI showed a large urinary bladder mass involving the posterior wall, both lateral walls and posterior superior wall (Figure 1) (Figure 2). This mass exhibit low T2 signal intensity and shows diffusion restriction and enhancing post-contrast sequences. The mass does extend beyond the muscular layer. This mass is inseparable from the lower cervix and upper vagina suspicious for invasion.

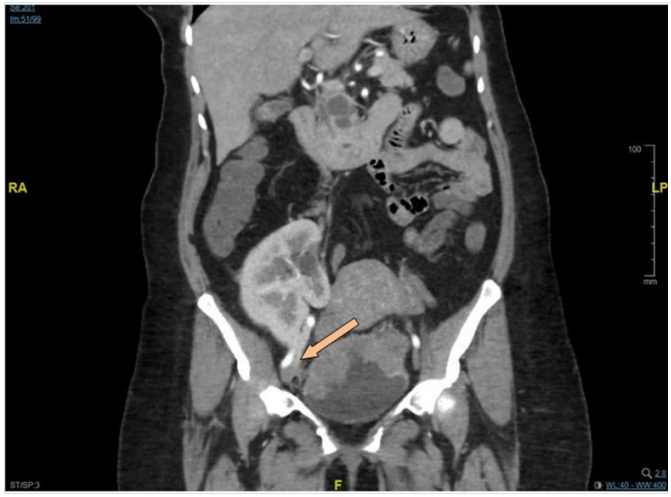

Figure 1 MRI showing invasion of the transplanted ureter by the tumor.

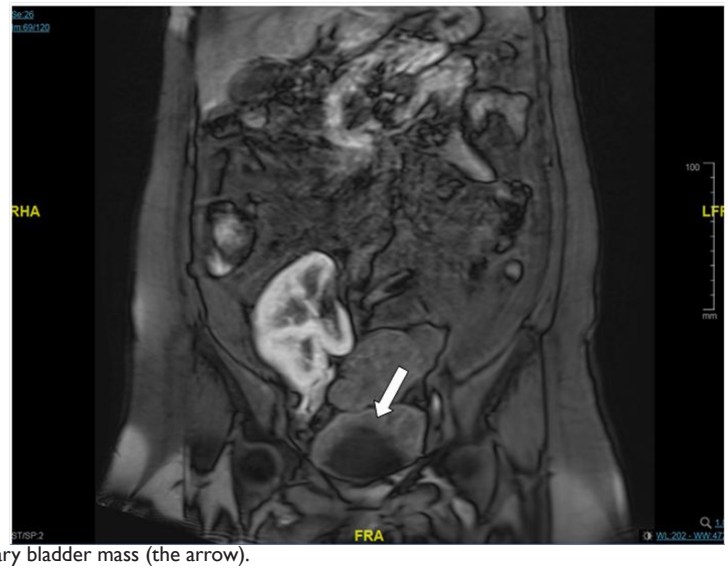

Figure 2 MRI showing the urinary bladder mass (the arrow).

There was involvement of vesicoureteric junction of the both sides causing grade IV left side hydroureteronephrosis. There is no synchronous mass seen within the ureter or the kidneys. The right transplant kidney shows grade II hydronephrosis and the ureter of the transplanted kidney is seen passing just anterior to the mass of the urinary bladder.

Cystoscopy and biopsy of the bladder mass and bladder wall showed Invasive keratinizing squamous cell carcinoma, moderately differentiated. Calcified ova of schistosoma species was seen in the biopsy, patient has whole body CT scan which showed no metastasis Tc-99m HDP WB BONE SCINTIGRAPHY no scintigraphic evidences of bone metastasis.

Treatment

Patient was taken to operation room and operated by a team from Urology Obstetrics & Gynecology and transplant surgeon, anterior pelvic exenteration (radical cystectomy, hystosalpingooverectomy, upper vaginectomy and most of the transplanted ureter she had ilieal conduit where its distal end was anastomosed to the pelvis of the transplanted kidney (iliopyelostomy) and its proximal end fashioned as cutaneous stoma for urine drainage, patient was discharged with normal renal function and her post operative creatinine was 73 umol/l on discharge. Last visit to the clinic showed stable graft function with creatinin of 64umol/L on 2-August-2018.

Pathology report

Sections show atypical epithelial cell proliferation with infiltration of the stroma, forming sheets, nests and islands (Figure 3) (Figure 4). The cells are highly atypical polygonal cells with well-defined cell boarder and eosinophilic cytoplasm. Nuclei are pleomorphic occasionally bizarre with irregular chromatin, prominent nucleoli and frequent mitosis. Prominent keratin pearls are seen. Significant number of calcified schistsome eggs is seen (Figure 3) (Figure 4). The final diagnosis was: invasive squamous cell carcinoma moderately differentiated. Associated with schistomiasis.[4,5]

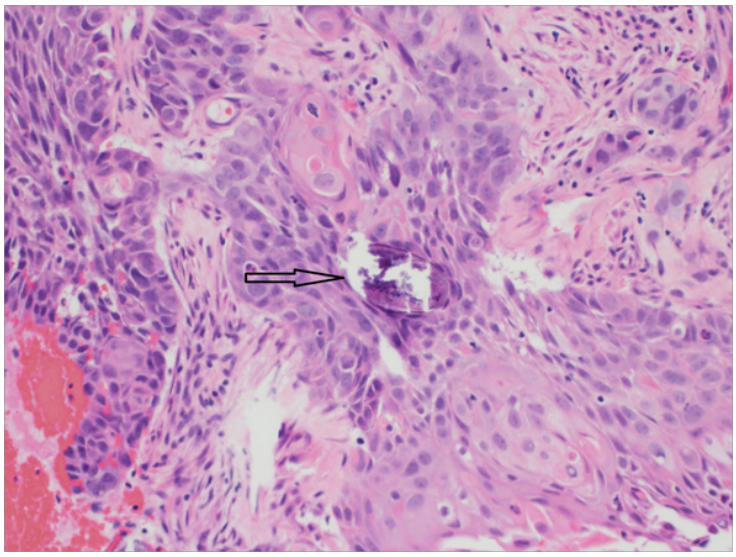

Figure 3 Urinary Bladder biopsy showing calcified Bilharzial ova (the arrow).

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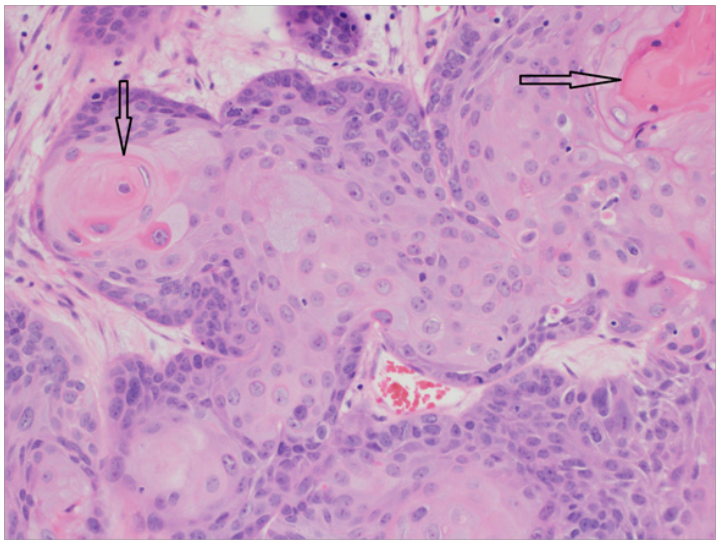

Figure 4 Urinary bladder biopsy showing squamous cell carcinoma (the arrow).

Conclusion

Cystoscopy and bladder biopsy must be included as a routine workup for any patient with history of bilharzizsis with a positive antibilharzial titer.

Acknowledgements

None.

Conflict of interest

None.

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