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POST INTRAVESICAL BCG PROSTATITIS – A CASE REPORT

Bhukte. S. A[1], Maurya. N. R[2], Bhavsar. U. C[3], Kulkarni. J. N[4]

[1] Fellow in Minimal Invasive Urology, Asian Cancer Institute, Mumbai, India.

[2] Surgical Registrar in Surgical Oncology, Asian Cancer Institute, Mumbai, India.

[3] Junior Consultant, Sahil General Hospital, Mumbai, India

[4] Head of Dept. of Uro-Oncology, Asian Cancer Institute, Mumbai, India.

ABSTRACT:

We herein report a case of 54 year old male who was treated with intravesical Bacilli Calmette-Guerin (BCG) immunotherapy after transurethral resection (TUR) of non-muscle involving bladder cancer (NMIBC). After the last BCG instillation, patient developed a late complication in the form of retention of urine. Diagnosis of tuberculous prostatitis was made based on clinical examination, imaging and histopathological diagnosis.

Keywords: Intravesical Bacilli Calmette-Guerin (BCG), Non-muscle involving bladder cancer (NMIBC), Tuberculous prostatitis

Introduction:

Bacillus Calmette -Guerin has been effectively used in the treatment of NMIBC since 1976[1]. Mycobacterium bovis is the most common strain used and it has proven benefits than chemotherapy. Many studies have demonstrated reduction in recurrence rate when combined with transurethral resection (TUR)[2]. Intravesical instillation of BCG is relatively safe with minimal side effects. The major side effects include granulomatous prostatitis, pneumonitis, hepatitis, sepsis and hypersensitivity reaction[3]. This side effect can be attributed to immune stimulation which is essential for eradication of cancer cells. Here we report a case of 54 year old male who developed tuberculous prostatitis following intravesical BCG instillation.

CASE REPORT:

A 54 year old male post intravesical instillation of BCG developed urinary obstruction 18 months after the therapy. Patient was operated 4 years back for bladder tumour and the histopathology reported as low grade papillary urothelial carcinoma grade 2. Lamina propria and detrusors were not involved. No further adjuvant therapy was advised and the patient was kept on regular follow up. During second annual check-up, cystoscopy revealed multiple tumour all over the bladder. Patient was completely asymptomatic with no urinary complains. TUR was done and histopathology reported as low grade papillary carcinoma with no muscle involvement. Patient was advised intravesical instillation of BCG 2 weeks following TUR. Intravesical instillation of BCG was carried out weekly for 6 weeks followed by cystoscopy every 6 months to look for recurrence. Patient was asymptomatic when he developed retention of urine after 18 months following a routine cystoscopy. A digital rectal examination revealed an enlarged and tender prostate. Biochemical evaluation revealed a high PSA levels (7.4ng/ml). MRI showed focal lesion in the posterior portion of peripheral zone in right paramedian location with small focal lesion in anterior portion of peripheral zone suspicious of

Corresponding author: Bhukte. S. A

neoplastic growth (PI-RADS 4) (Figure1). Trans Rectal Ultrasound guided biopsy revealed caseating granulomatous inflammation in prostatic tissue probable of mycobacterial origin .Patient was started on anti-tubercular treatment with rifampicin, isoniazid and ethambutol for 9 months duration. Patient is on follow up since last 18 months and is asymptomatic.

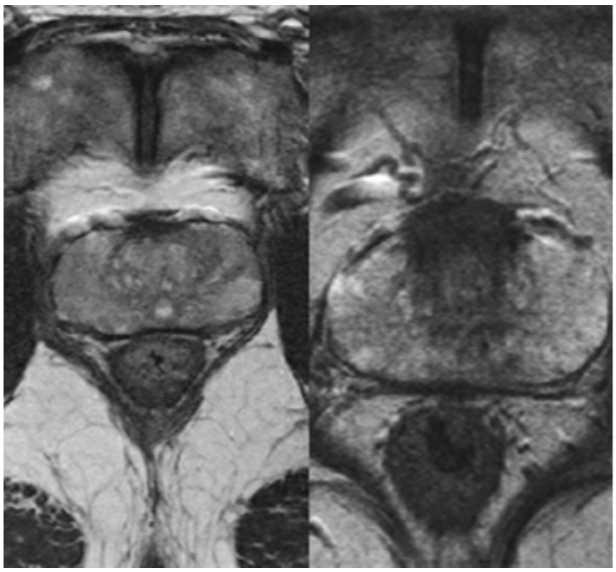

Figure 1: MRI (T1-image) showing focal lesions in the peripheral zone of prostate.

DISCUSSION:

Immunotherapy with intravesical BCG is the treatment of choice in cases of superficial bladder carcinoma with no muscle involvement. Preventive therapy is indicated after TUR in patients with high risk of progression or high risk of recurrence[1]. BCG attaches itself to urothelium facilitated by fibronectin resulting in an immune mediated response. Also it inhibits tumour motility through BCG-fibronectin-tumour cell interaction. Following BCG instillation there is also an increased expression of human leucocyte Antigen (HLA)- DR on tumour cells and infiltration of tumour cells with lymphocytes (T-helper cells and macrophages)[4].

BCG therapy is highly efficacious with 95% of the patients tolerating the therapy well. Adverse reactions though rare include haematuria, cystitis and granulomatous prostatitis[5]. In studies by Lamm et al the incidence of granulomatous prostatitis was reported to be around 0.9%. in our case patient presented with lower urinary tract symptom (LUTS)(urinary obstruction) thus raising suspicion of benign prostatic hypertrophy (BPH). Further biochemical and imaging studies pointed our diagnosis towards occult malignancy or a second primary in prostate. Final diagnosis was confirmed on biopsy and treated accordingly. In such cases the diagnosis is generally pathological as isolation of bacteria is less common. Polymerase chain reaction (PCR) may serve as a useful rapid diagnostic tool in isolation of mycobacterium bovis[6].

CONCLUSION:

A careful selection of patients for BCG therapy and the assessment of risk factors will help avoid such complications. Post intravesical BCG induced prostatitis can be a delayed adverse effect and should be investigated and treated as per guidelines. Early diagnosis of complications, preventing them when possible and managing them efficiently are essential.

REFERENCES

1. Albinas Naudziunas, Ruta Juskaite, Indre Ziaugryte, et al. Tuberculosis Complication after BCG treatment for Urinary Bladder Cancer. Medicinia (Kaunas) 2012; 48(11): 563-5.
2. Han RF, Pan JG. Can intravesical Bacillus Calmette- Guerin reduce recurrence in patients with superficial bladder cancer? A meta-analysis of randomised trials. Urology 2006; 67(6): 1216-23.
3. Jonas Alves, Angelica Ramos, Teresa Carvalho, Susana Silva, Joao Guimaraes et al. BCG Infection after Bladder Cancer Treatment- 3 Clinical Case Reports. Advances in Infectious Diseases, 2015, 5, 218-221.
4. Richard C, Lockyer W, Gillat DA. BCG immunotherapy for superficial bladder cancer. J R Soc Med 2001:94(6); 316.
5. Suk Young Lee, Sang Hee Choi. Treatment experience for incidentally diagnosed asymptomatic prostate tuberculosis in a patient with history of BCG intravesical

therapy. Urology Case Reports 17 (2018) 39-41.

6. Won H, Rothman R, Ramchandran P, Hsieh YH, et al. Rapid Identification of bacterial pathogen in positive blood culture bottles by use of a broad based PCR assay coupled with high resolution melt analysis. J Clin Microbiol 2010; 48(9): 3410-3.