

Cutaneous metastasis of transitional cell carcinoma urinary bladder on fine needle aspiration cytology: an unusual presentation

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Abstract

Cutaneous metastases from Transitional Cell Carcinoma Urinary Bladder is very rare and associated with poor prognosis. In this case report a 75 year old male came with multiple subcutaneous metastases arising from Transitional Cell Carcinoma of Urinary Bladder. 2 years back the patient underwent Partial Cystectomy for the Transitional Cell Carcinoma Urinary Bladder, 6 months later he presented with 3 subcutaneous nodules arising from scalp, lumbar and epigastric region. FNAC was performed from all the nodules which showed cytological features of Urothelial Carcinoma. As this presentation was an unusual one awareness into this is needed in order to rule out metastases in patients with any previous history of Transitional Cell Carcinoma in patient who present with cutaneous lesions.

Keywords: Cutaneous metastases, Transitional Cell Carcinoma, Urinary Bladder, Fine needle aspiration cytology.

Introduction

Bladder Cancer is more common in men being the fourth most common cancer than the women, male to female ratio being 3:1. About 80% of the patient are of age group 50-80 yrs.^(1,10) About half of the patients (50%) who undergo Radical Cystectomy develop either local recurrence or metastases.^(1,10,15,16) This case is very rare and is associated with poor prognosis and the total no. Of published cases is also very less.^(3,7,10) Sometimes, the first sign of advanced disease from internal malignancies can present as cutaneous lesion. Incidence of cutaneous metastases that are documented is 5.3% of all the cancer patients.^(10,12,16) Overall reported incidence of cutaneous metastases from primary Urologic malignancies is 1.3% and that of Urinary bladder causing cutaneous metastases is 0.84%.^(2,10,16) The most common site for metastasis from bladder cancer are regional lymph nodes, liver, lung and bone marrow.⁽¹⁰⁾ Skin metastases being very rare can present as fibrotic and nodular inflammatory type.^(2,10) Nodular type is more common either being single or multiple.^(3,10) In this case report, we present a patient who had undergone partial cystectomy for transitional cell carcinoma of urinary bladder and later came with multiple cutaneous metastases.

Case Report

A 75 years old patient presented in our laboratory with multiple subcutaneous skin nodules for the duration of 6 months. On physical examination these nodules were of varying sizes present over the scalp, left lumbar and epigastric region measuring 3×2.5cm, 4×3.5cm and 4×3cm respectively. The nodules were soft to firm in consistency, tenderness being present only in the epigastric nodule. The patient had no other significant findings. On reviewing his past medical records it was seen that 2 years back the patient had undergone partial

cystectomy for Transitional cell carcinoma of the Urinary Bladder. All other routine investigations including Complete Blood Picture, Liver Function Test, Renal Function Test, Blood Sugar, Chest X-Ray and Abdominal X-Ray were performed. Routine blood investigation showed no significant findings. Chest and abdominal X-Ray were unremarkable.

Fine Needle Aspiration Cytology was performed from all the three nodules and the smears were made which showed the following features:

Aspirate from the scalp swelling yielded cellular material. Smear showed discohesive tumour cells in singles, sheets and papillae like, the cells have got abundant thick cytoplasm with eccentric nucleus, coarse chromatin and indistinct nucleoli. These sheets of tumour cells are ensheated by spindle cells (Cercariform Cells). Aspirate from both the epigastric and lumbar region yielded similar cells.

On FNAC, the diagnosis of cutaneous metastases from Transitional Cell Carcinoma Urinary bladder was made.

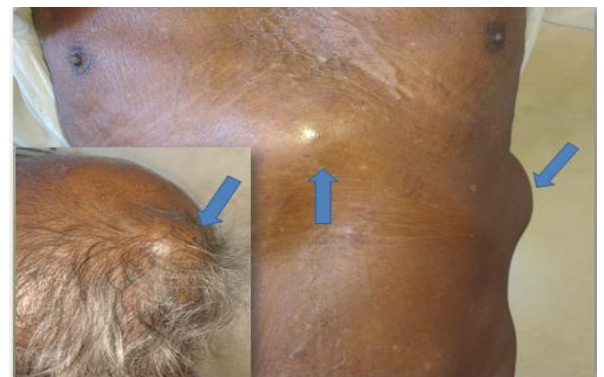


Fig. 1: Arrows showing multiple swelling over the epigastric and lumbar region, with the inset showing swelling in the scalp

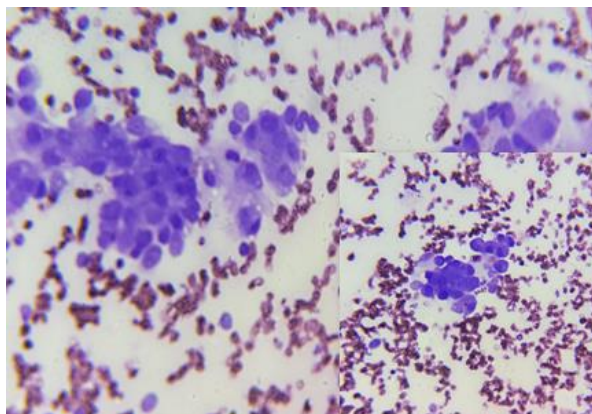


Fig. 2: High power view of FNAC smear from epigastric region showing cluster of atypical cells with abundant thick cytoplasm and eccentric nucleus

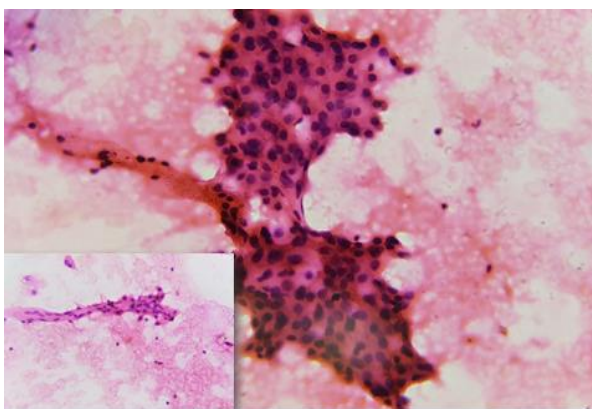


Fig. 3: High power view of FNAC smear from the lumbar region showing papillae like arrangement of tumour cells ensheated by spindle cells (Cercariform cells)

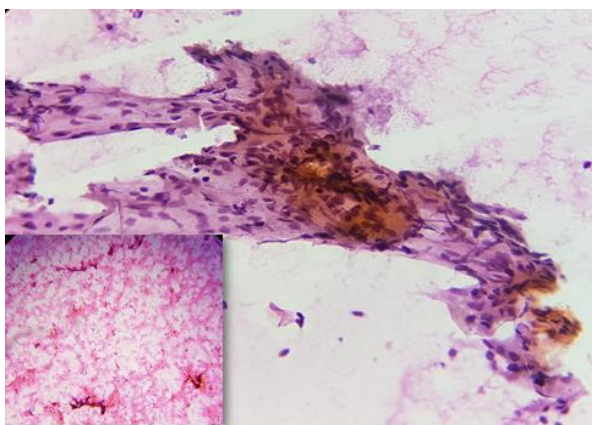


Fig. 4: High pwer view of FNAC smear from the scalp showing tumour cells arranged in papillae ensheated by spindle cells(cercariform cells). Inset shows low power view of the same having cellular material with discohesive tumour cells in singles, sheets and papillae

Discussion

Cutaneous maetastases arising from internal malignancies is very rare and can present as first sign of an advanced disease. Krathen et al., found that overall incidence of cutaneous metastases in cancer patients was 5.3%,^(1,10,12,16) the most common origin of cutaneous metastases being Breast Cancer. Cutaneous metastases from primary Urological malignancies is seen in 1.3% of the patients.^(1,3,16) Muller et al., found that the incidence of cutaneous metastases from bladder cancer was 0.84%.^(1,3) Metastases from the Urinary bladder cancer is mostly seen in regional lymph nodes, but the most common cause of seeding outside the urinary tract can be iatrogenic implantation from certain surgical procedures as well such as partial cystectomy, suprapubic cystotomy, laproscopy.^(13,14) Grossly, cutaneous metastases is not characteristic and may look alike many dermatological disorders.⁽¹²⁾ The most common site for metastases from Urological malignancies besides regional lymph nodes are liver, lungs and bonemarrow.^(1,2,17) The main cause for cutaneous spread in majority of patients with transitional cell carcinoma bladder is thought to be due to an iatrogenic implantation.⁽¹⁾ Prognosis of such patients is usually poor and the mean survival is less than 12 months.^(1,16) In patients with advanced age and disease stage treatment of choice is restricted to palliative therapy.^(1,2) Chemotherapy is the Treatment of choice for metastatic bladder cancer which is seldom curative, currently the combination of Gemcitabine and Cisplatin and the MVAC scheme (Methotrexate, Vinblastine, Doxorubicin and Cisplatin) are being used with 70% remission in many cases. However, survival does not exceed more than 14 months in most cases.^(1,15,16) Surgery in metastatic bladder cancer can only be done in recurrent disease which are respectable.

Fine Needle Aspiration cytology can be very helpful for this diagnosis in excluding other differential diagnoses.^(10,14) FNAC a non-invasive procedure saves time and money of the patient. In our case biopsy was not done as the FNAC report was considered conclusive and treatment of the patient was started for metastatic urothelial carcinoma.

Conclusion

This case is very unique as our patient had multiple cutaneous nodules in the scalp, left lumbar and epigastric region which is a very rare presentation of Transitional cell carcinoma metastates and one should always consider metastatic disease as a differential diagnosis in patients already having past history of Bladder cancer. This case also highlights the importance of Fine Needle Aspiration Cytology as an important diagnostic tool for diagnosing advanced malignancies and metastatic lesion.

References

1. Salemis NS, Gakis C, Zografidis A, Gourgiotis S. Cutaneous metastasis of transitional cell bladder carcinoma: A rare case presentation and literature review. *J Cancer Res Ther*,2011;7;217-9.
2. Mueller TJ, WU H, Greenberg RE, Hudes G, Topham N, Lessin SR, et al. Cutaneous metastasis from genitourinary malignancies. *Urology*,2004;63;1021-6.
3. Lees Andrea N, Cutaneous metastasis of transitional cell carcinoma of the urinary bladder eight years after the primary: a case report, *J med case report*,2015;9;102.
4. Block CA, Dahmouh L, Konety BR. Cutaneous metastasis from transitional cell carcinoma of the bladder, *Urology*, 2006;67;846,el 5-7.
5. Narayana MA, Patnayak R, Rukmangadha N, Chowhan AK, Kottu R, Phaneendra BV. Cutaneous metastasis of transitional cell carcinoma of the urinary bladder: cytological aspect, *J Cytol* 2014;31;50-2.
6. Schmiedecke R, Perry A, Satter EK. Cutaneous metastasis of transitional cell carcinoma, *Dermatol online* 2014;20.
7. Beautyman EJ, Garcia CJ, Sibulkin D, Sunder PB. Transitional cell bladder carcinoma metastatic to the skin *Arch Dermatol*,1983;119;705-7.
8. Brownstein MH, Helwig EB, Spread of tumors to the skin.1973;107;80-6.
9. Akman Y, Cam K, Kavak A, Alper M. Extensive cutaneous matastasis of transitional cell carcinoma of the bladder. *Int J Urol*.2003;10;103-4.
10. Mittal N, Cytological findings of an unusual case of cutaneous metastasis of transitional cell carcinoma of urinary bladder, Consultant, Sarvodaya Hospital and research centre sector 8, Faridabad, Haryana (May 2015).
11. Chitale SV, Morrow DR, Patel R, Gaches CGC, Ball RY. Cutaneous metastasis from transitional cell carcinoma of the bladder and renal pelvis. *Br J Urol*.1997;79;292-3.
12. Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: a meta-analysis of data. *South Med J* 2003;96:164.
13. Miyamoto T, Ikehara A, Akari M, Akaeda T, Mihara M. Cutaneous metastatic carcinoma of the penis: suspected metastasis implantation from a bladder tumour, *J Urol*.2000; May;163(5):1519.
14. Kumar PV, Salami B, Musallaye A, Tadayyon A(2000). Subcutaneous metastasis from transitional cell carcinoma of the bladder diagnosed by fine needle aspiration cytology. *Acta Cytol* 44;657-660.
15. Jakse G, Stockle M, Lehmann J, Otto T, Krege S, Rubben H. Metastatic bladder carcinoma. *Dtsch Arztebl* 2007;104:A1024-8.
16. Jemal A, Siegel R, Ward E, Hao Y, Xu J, Thun MJ. Cancer statistics,2009. *Cancer J Clin* 2009;59:225-49.
17. Atmaca AF, Akbulut Z, Demirci A, Belenli O, Alici S, Balbay DM. Multiple subcutaneous nodular metastasis from transitional cell carcinoma of the bladder. *Pathol Oncol Res* 2007;13:70-2.