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Unusual Metastases after Robot Assisted Radical Cystectomy: A Case Report

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Abstract

We present a rare case of isolated metastases in right infraclavicular region following a Robot assisted radical cystectomy, which is not yet reported in the literature.

Keywords: Robot assisted radical cystectomy (RARC); Isolated unusual metastases

Introduction

Recurrences after laparoscopic and robotic surgeries can be either local or distant. Several studies have established the oncological safety of such minimally invasive procedures for various pelvic malignancies [1,2]. Robot Assisted Radical Cystectomy (RARC) has gained popularity and has shown similar oncological outcomes to open surgery [2]. Port site and unusual metastases after minimally invasive approach are rarely reported in the literature [3-6]. To the best of our knowledge no isolated metastases to infraclavicular region after RARC has been documented in literature. Besides this the management of such recurrences is difficult due to lack of established guidelines. The mechanism of such recurrences is still a dilemma [7]. Majority of recurrences have been documented in the higher stage disease [8].

Case Report

A 40-year-old gentleman, non-smoker, presented to our outpatient department in June 2016 with history of transurethral resection of bladder tumor (TURBT) elsewhere. The histopathology was suggestive of T1 high grade urothelial carcinoma. He was further worked up and in view of young age and presence of transmural involvement on CT scan he was advised early cystectomy. He underwent RARC with extended PLND with open orthotopic neobladder (Monsura pouch). Post-operative recovery was uneventful. His final HPE report was suggestive of CIS only and 23 lymph nodes negative. He presented to us with complaints of right infraclavicular area swelling at the follow-up of 6 months. On examination there was a hard swelling of size 5 cm × 5 cm in the right infraclavicular region close to deltopectoral groove area (Figure 1a). The swelling appeared to lie below the pectoralis major muscle and was non mobile. FDG PET- CT scan revealed an intense FDG uptake in the swelling and there were no other areas suggestive of metastasis (Figures 1b-1d). FNAC from the swelling was suggestive of metastatic poorly differentiated carcinoma. In view of resectable disease, he underwent excision of mass by a transverse incision in right deltopectoral groove in March 2017. Intraoperatively the mass was lying at level 3 axillary lymph nodal level, no other enlarged lymph nodes were seen. Post operative course was uneventful. Final HPE was suggestive of poorly differentiated carcinoma, likely metastatic urothelial carcinoma with free margins but infiltration into surrounding adipose tissue (Figures 2a and 2b). Patient was subsequently planned for adjuvant chemotherapy and Radiotherapy to the tumor bed.

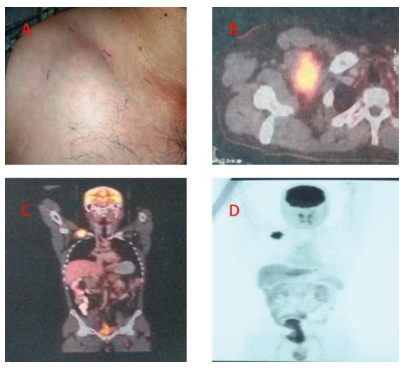

Figure 1: a) Clinical image (Marked Right infraclavicular 5 cm × 4 cm metastatic mass) **b-d**: FDG PET CT images showing isolated metastasis to right infraclavicular region only.

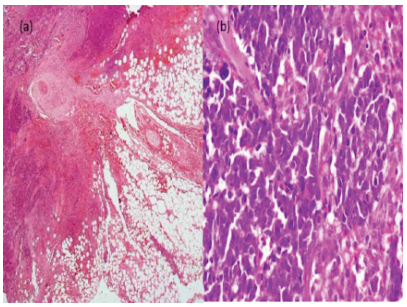

Figure 2: Microphotograph **(a)** showing islands and small clusters of tumor cells eliciting desmoplasia and infiltrating adipose tissue. Note- No native lymph nodal tissue seen, this could be soft tissue tumor deposit as well. (10x magnification), **(b)** Tumor cells with moderate nuclear pleomorphism, higher N/C ratio and oval irregular nuclei with frequent mitoses. (40x magnification).

Discussion

The safety of laparoscopic and Robotic uro-oncological procedures has already been established [1,2]. Various studies have reported a low incidence of port site metastases after laparoscopic uro-oncological procedures [3-5]. Robotic surgery is a newer modality for managing complex uro-oncological procedures, providing better vision, improved dexterity, and similar oncological outcomes compared to open procedures. Only isolated case reports exist for port site metastases after Robot assisted procedures [6-8]. Since the first documented report of Port site metastases after RARC in 2005, there has been similar reports after RALP, RA NSS, and other robot assisted gynaecological operations [3,4]. Port site metastases after RARC have been seen in

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higher stage diseases only [6-8]. Various factors have been implicated in the pathogenesis of port site metastases after laparoscopic surgeries including, Pneumoperitoneum related, surgical technique, and local immune system dysfunction [5,7,8]. Recurrences after RARC can be either local or distant. To the best of our knowledge isolated metastases to infraclavicular lymph nodes after RARC have not been documented in the available literature. The mechanism of such unusual isolated recurrence is difficult to formulate. Possible tumor cell dissemination, enhanced by steep Trendelenberg position and pneumoperitoneum, via diaphragmatic lymphatic can explain this unusual isolated site of recurrence. The management of such cases is furthermore challenging due to the absence of available guidelines and usually involves multimodality treatment. We did wide local excision of the mass in this case in view of poorly differentiated tumor on FNAC, surgically resectable disease and younger age of the patient.

Conclusion

Unusual recurrences do occur after RARC and are a therapeutic challenge requiring multimodality treatment.

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