

Osteomyelitis of the pubic bone with vesicocutaneous — vesicovaginal fistula: A delayed complication of post-cervical cancer radiotherapy

Abhijeet Ashok Salunke, Gurunathampalayam Ilango Nambi, Arumugam Manoharan¹

Hand and Reconstructive Microsurgery, National University Hospital, Singapore, ¹Plastic and Reconstructive Services, Comprehensive Cancer Center, Kovai Medical Center and Hospital, Coimbatore, Tamilnadu, India

ABSTRACT

Address for correspondence:

Dr. Abhijeet Ashok Salunke,
Clinical Fellow Orthopaedic
Oncosurgery, Hand &
Reconstructive Microsurgery,
National University Hospital,
5 Lower Kent Ridge Road,
Singapore 119074
E-mail: drabhijeetsalunke@
gmail.com

Vagino-vesico-cutaneous fistula is a rare condition characterised by continuous dribbling of urine and secondary infection of the involved areas with poor self-esteem.

Osteomyelitis is delayed complication of radiotherapy treatment for cervical cancer.

Treatment of these conditions is a challenging entity especially after previous surgery and irradiation. We present a case of vesicocutaneous — vesico vaginal fistula with osteomyelitis of the right pubic bone which was a late complication of post-cervical cancer radiotherapy.

Keywords: Anterolateral thigh flap, cervical cancer, Osteomyelitis, Pubic bone, Vesicovaginal fistula

INTRODUCTION

Carcinoma cervix is a common malignancy of the female genital tract and radiotherapy is a standard mode of management. Although with the recent advances, the complications associated with radiotherapy have reduced, we do continue to come across long-term complications of radiotherapy given decades ago for different malignancies. Management of these complications are a challenge to the oncology team and requires case oriented approach. We present a case of vesicocutaneous — vesicovaginal fistula with osteomyelitis of the right pubic bone which was a late complication of post-cervical cancer radiotherapy.

CASE SUMMARY

A 75-year-old lady presented with a non-healing ulcer in her lower abdomen since 1 year. She was treated for carcinoma cervix 30 years ago with radiotherapy treatment and was disease free since then. Two years ago, she noticed discoloration of her lower abdominal skin which gradually

ended in an ulcer with dribbling of urine. She was treated with surgical debridement and regular dressings. Despite this treatment she developed ulcer in lower abdominal which was increasing in size with continuous dribbling of urine and intermittent vaginal dribbling of urine. For the past year she was confined to her home with continuous dribbling of urine which required frequent change of dressings, irritation of the surrounding skin and low self-esteem. For further management the patient was referred to our centre. On examination, there was an ulcer over the hypogastrium which was dribbling with urine, exposing a part of the posterior wall of the urinary bladder and granulation tissue associated with features of urinary tract infection [Figure 1]. She was admitted and her general condition was improved with administration of intravenous antibiotics, control of infection, blood transfusion and improvement nutritional status. Radiograph of pelvis was suggestive of osteomyelitis of right pubic bone. Computed tomography of pelvis was suggestive of osteomyelitis of right pubic bone [Figure 2]. Multiple biopsies from the lesion were performed to rule out recurrence of cancer and the histopathological examination was suggestive of chronic infection. After improvement of patient, general condition urinary diversion was performed with bilateral percutaneous nephrostomy. Multiple wound debridement's were performed with removal of the necrotic soft tissue, right pubic bone, remnant bladder wall and ligation of the lower ureteric ends. The vesicovaginal fistula was excised and the vaginal wound was closed from above. Once the infection settled and the urinary fistula was controlled

Access this article online

Quick Response Code:



Website:

www.nigeriamedj.com

DOI:

10.4103/0300-1652.128179

with diversion, the lower abdominal defect was covered with pedicled anterolateral thigh flap from the left side [Figures 3 and 4]. The flap settled well and the patient was able to perform activities of daily living. Patient is on regular follow-up and disease free.

DISCUSSION

Carcinoma cervix is a common malignancy of the female genital tract; radiotherapy, chemotherapy and surgical treatment are the modes of management.¹ The complications associated with pelvic radiation include osteomyelitis of pubic bone, secondary osteosarcoma, vesicovaginal fistulas. Due to use of the recent advances in radiotherapy treatment the complications associated with radiotherapy have been reduced, but the delayed complications of radiotherapy given decades ago for different malignancies at presented in clinical settings. Management of these complications is a challenge to the oncology team and requires case-oriented approach.

Although a single complication can be managed by concerned specialist, rare occurrences of multiple complications requires a combined team approach. In this case, the inflammation associated with continuous urinary flow was first controlled by bilateral percutaneous nephrostomy, the infection was then treated with higher antibiotics and repeated debridement of necrotic soft tissue and pubic bone. The wound was thus converted from a chronic wound to an acute wound, the vesicovaginal fistula was repaired and the entire wound was covered with pedicle anterolateral thigh flap.

Osteomyelitis of the pelvic bones is a rare complication after pelvic radiotherapy and occurs a long time after primary radiation.² In our case, the osteomyelitis of the right pubic bone was a primary complication or secondary to the urinary fistula could not be determined. Plain radiograph, computed tomography and magnetic resonance imaging aids for diagnoses of



Figure 1: Clinical picture suggestive of non-healing ulcer over hypogastrium

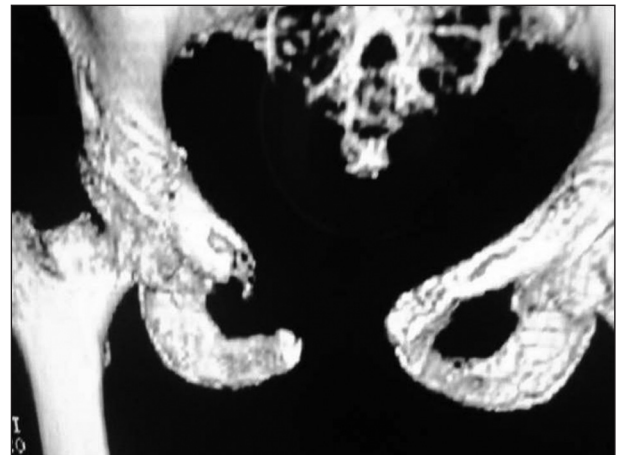


Figure 2: Computed tomography of pelvis with 3 D reconstruction suggestive of osteomyelitis of right pubic bone



Figure 3: Postoperative clinical picture showing anterolateral thigh flap covering the hypogastric ulcer



Figure 4: Follow-up clinical picture showing well-accepted anterolateral thigh flap

osteomyelitis of pubic bone. The osteomyelitis of the right pubic bone was managed with radical debridement and wound wash.

Percutaneous nephrostomy is a standard treatment in the management of post-radiotherapy urinary complications.³ Percutaneous nephrostomy is used most commonly in obstructive symptoms, in our case it was adopted to control the infection and reduce the inflammation associated with continuous flow of urine in to the pelvis and on to the abdominal skin causing excoriation of the wound margins.

The remnant parts of the posterior wall of the urinary bladder along with the mucosa were removed and the vesicovaginal fistula was closed.

Complex defects in abdominal wall are due to infection, tumour resection and traumatic injuries and the treatment options are use of free flaps or pedicle flaps.⁴⁻⁶ Anterolateral thigh flap is an ideal flap (pedicled and free) for soft tissue cover in different regions of the body.⁷⁻⁹ The entire defect in the lower abdomen was covered with a pedicle anterolateral thigh flap; an anterolateral thigh musculo-cutaneous flap measuring 23 × 9 cm was mobilised to cover the defect. The flap settled well by filling in to the cavity and giving a good skin cover. This flap was selected because it was well away from the area of irradiation and the flap donor site was closed primarily enabling good healing and faster recovery.

We emphasize role of team-based approach for treatment of complication of radiotherapy in treatment of various malignancies.

REFERENCES

1. Turina M, Mulhall AM, Mahid SS, Yashar C, Galandiuk S. Frequency and surgical management of chronic complications related to pelvic radiation. *Arch Surg* 2008;143:46-52.
2. Shah TP, Visana KN, Shah HR, Ranka P, Chaudhary RR. Vesicocutaneous fistula associated with osteomyelitis of pubic bone – a rare delayed complication of ovarian tumour surgery. *Indian J Urol* 2002;18:177-9.
3. Mishra K, Desai A, Patel S, Mankad M, Dave K. Role of percutaneous nephrostomy in advanced cervical carcinoma with obstructive uropathy: A case series. *Indian J Palliat Care* 2009;15:37-40.
4. Kao CC, Rand RP, Stridde BC, Marchioro TL. Techniques in the composite reconstruction of extensive thoracoabdominal tumour resections. *J Am Coll Surg* 1995;180:92:146-9.
5. Dumanian GA. Abdominal wall reconstruction. In: Thorne CH, Beasley RW, Aston SJ, Bartlett SP, Gurtner GC, Spear SL, editors. *Grabb and Smith Plastic Surgery*. Philadelphia: WB Saunders; 2007. p. 665-69.
6. Rohrich RJ, Lowe JB, Hackney FL, Bowman JL, Hobar PC. An algorithm for abdominal wall reconstruction. *Plast Reconstr Surg* 2000;105:202.
7. Friji MT, Suri MP, Shankhdhar VK, Ahmad QG, Yadav PS. Pedicled anterolateral thigh flap: A versatile flap for difficult regional soft tissue reconstruction. *Ann Plast Surg* 2010;64:458-61.
8. Yadav PS, Ahmad QG, Shankhdhar VK, Nambi GI, Pramesh CS. Reconstruction of complex thoraco abdominal defects with extended anterolateral thigh flap. *Indian J Plast Surg* 2010;43:158-65.
9. Tan PW, Wong CH, Koong HN. Chest wall reconstruction using a combined musculocutaneous anterolateral- anteromedial thigh flap. *Indian J Plast Surg* 2010;43:88-91.

How to cite this article: Salunke AA, Nambi GI, Manoharan A. Osteomyelitis of the pubic bone with vesicocutaneous - vesicovaginal fistula: A delayed complication of post-cervical cancer radiotherapy. *Niger Med J* 2014;55:83-5.

Source of Support: Nil, **Conflict of Interest:** None declared.

Announcement

iPhone App



Download
**iPhone, iPad
application**

FREE

A free application to browse and search the journal's content is now available for iPhone/iPad. The application provides "Table of Contents" of the latest issues, which are stored on the device for future offline browsing. Internet connection is required to access the back issues and search facility. The application is Compatible with iPhone, iPod touch, and iPad and Requires iOS 3.1 or later. The application can be downloaded from <http://itunes.apple.com/us/app/medknow-journals/id458064375?ls=1&mt=8>. For suggestions and comments do write back to us.