Case Report

Single sitting modified radical vulvectomy and vulvoplasty in squamous cell carcinoma of vulva – a case report

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ABSTRACT

A 50 year old lady with keratinizing squamous cell carcinoma vulva stage II (FIGO) underwent modified radical vulvectomy with extensive lymph node dissection alongwith vulval reconstruction by Z-plasty. Vulvar carcinoma is the rare among the gynaecological cancer mostly encountered among the post-menopausal women. The gold standard surgical treatment is currently modified radical vulvectomy along with inguino-femoral lymph node dissection if present in the operable stage. Vulval disfigurements, narrowing of introitus, recurrent urinary tract infections are the most common complications. Performing vulvoplasty in the same sitting of radical vulvectomy may alleviate most of these long term complications and also beneficial to the patient for her conjugal life as it maintains the vulval shape and introitus.

KEYWORDS: Radical vulvectomy, squamous cell carcinoma, vulval biopsy, vulvar cancer, vulvoplasty

INTRODUCTION

Vulvar carcinoma is uncommon, representing only 2% of female genital tract malignancies.[1] It is mainly disease of postmenopausal women with median age of diagnosis at approximately 65 years. Between the mid 1970s and the mid 1990s the incidence of *in situ* vulvar cancer nearly doubled, whereas invasive squamous cell carcinoma incidence has relatively remained stable [2,3]. In younger women (< 50 years) there is a striking increase of both *in situ* as well as invasive squamous cell carcinoma[4]. Squamous cell carcinoma comprises of about 90% of all primary vulvar malignancies, whereas melanomas, adenocarcinomas, basal cell carcinomas and sarcomas are much less common. Based on histopathological

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and environmental factors, there are two distinct etiological entities of squamous cell carcinoma of vulva:

1. Keratinizing squamous cell carcinomas (KSCs), which is usually unifocal and occur in older age, are not related to human papilloma virus (HPV) infection.
2. Basaloid or warty type, which is multifocal, occur in younger patients and are related to HPV infection and cigarette smoking.

We have reported a case of keratinizing squamous call carcinoma of vulva in a 50 year old woman.

Case Report

A50 year old lady Para 2 (P_{2+1}) , belonging from an average socio-economic background presented to our Out Patient Department of Obstetrics and Gynaecology, College of Medicine & JNM Hospital, WBUHS, Kalyani, West Bengal with chief complaints of vulvar mass along with burning micturition and dysuria for last 7 month. On inspection a fungating ugly looking lesion of about (6×4) cm was observed on her left labia majora and minora upto lower 1/3rd of vagina and leukoplakia of other side of labia majora (Fig1). The lesion was not involving the other labia or the rectum. Her upper part of vagina, cervix looked healthy, uterus was mobile on per speculum and per vaginum examination. Inguinal lymph nodes were non palpable.

Medical history was negative for any pre existing illness such as diabetes mellitus or hypertension. There was no history of smoking. There was no family history of any genital malignancy. PAP smear was negative for intraepithelial lesion of malignancy. VDRL and HIV tests were non reactive for the patient. In the histopathology reports from the biopsy of the ulcer showed well differentiated keratinizing invasive squamous cell carcinoma of vulva. As per revised FIGO staging for vulvar carcinoma 2009, a diagnosis of keratinizing squamous cell carcinoma vulva stage II was made. CT scan abdomen and pelvis did not show any visible metastasis.

She was planned for modified radical vulvectomy with extensive lymph node dissection (femoral, internal iliac, external iliac obturator, pre and para – aortic). Skin mobilized from the adjacent tissue by Z-plasty and artificial vulva made by reconstructive surgery (Fig 2 and 3).

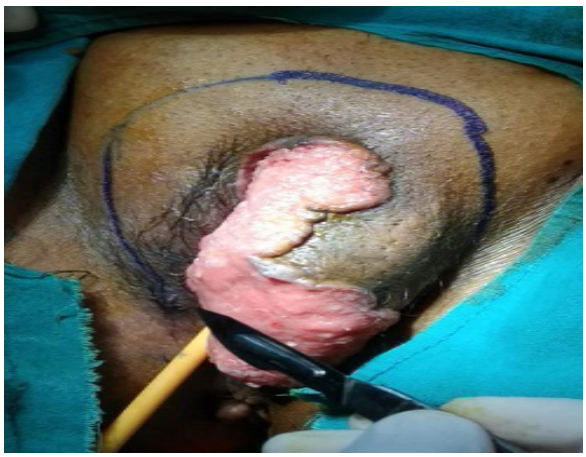

Figure 1: Lesion as seen on admission; involving left labia majora and minora and leukoplakia of right labia majora.

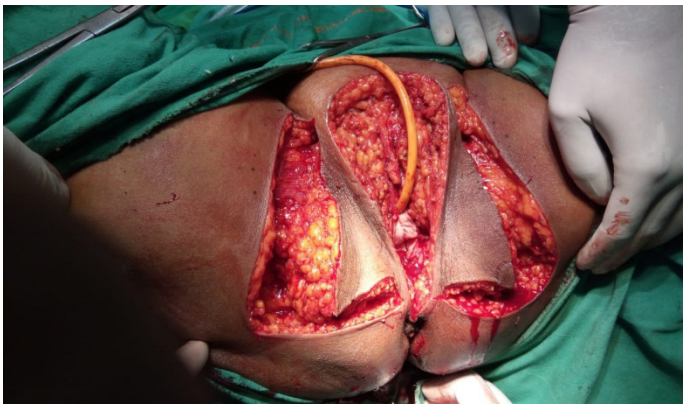

Figure 2 : Intra operative appearance of lesion after resection of the involved part.

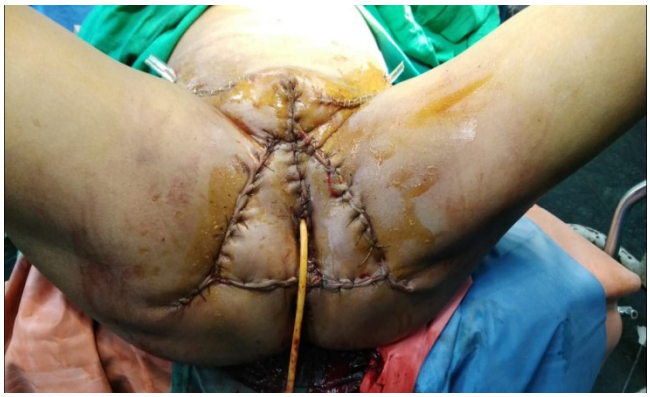

Figure 3 : Post operative appearance of perinael area showing the flap transfer from adjoining areas and reconstruction of artificial perineum.

Patient did absolutely well in the recovery time and was discharged on D24. Patient will be followed up every 3 month for one year, six monthly for next five years and annually after that. Currently she is doing very well without any complaint and narrowing of vaginal aperture (Fig4).

DISCUSSION

Vulvar carcinoma is an uncommon cancer of female genital organ usually affecting postmenopausal age group. There are several risk factors for vulvar cancer such as human papilloma virus infection, cigarette smoking, immunodeficiency syndrome, vulvar dystrophy, vulvar or cervical intraepithelial neoplasia, a previous history of cervical carcinoma.[5] However in this patient none of the risk factor was found. High grade vulvar intraepithelial neoplasia (VIN3) has been most closely studied as a potential precancerous lesion. Direct progression of VIN to cancer is difficult to document but a recent review of 3,322 published patients with VIN3, reports a 9% progression rate to cancer for untreated cases.[6] So early diagnosis and treatment is a crucial step. In keratinizing carcinoma, associated lichen sclerous or squamous hyperplasia is found in more than 80% patients,[7,8] yet their causative role remains controversial. Cervical examination is recommended, as

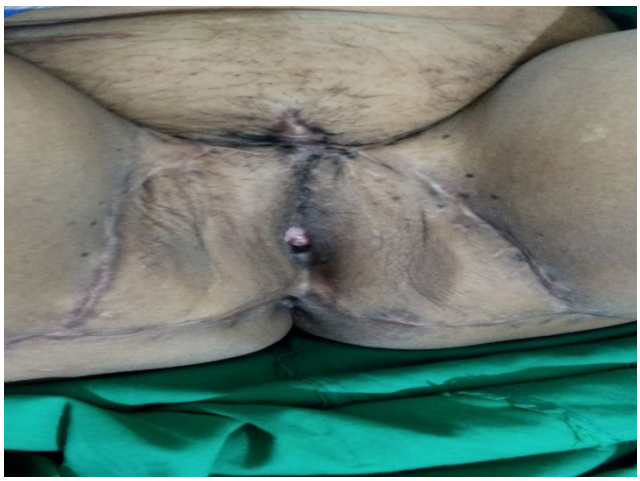

Figure 4 : Healthy and well healed up vagina and perineum 3 months after the surgery.

women with vulvar carcinoma are at an increased risk of developing other anogenital cancers, especially cervical cancer. In early vulvar tumours the risk of lymph node metastasis is reported to be low.[9]

Due to a number of significant advances made in the management of vulvar cancer, a paradigm shift has been there towards a more conservative surgical approach without compromising survival. Individualization of the treatment should be considered for all patients with invasive disease. Modified radical vulvectomy with unilateral or bilateral inguinal/femoral lymphadenectomy depending upon stage of the lesion remains the standard therapy. Proximity to important functional structures such as clitoris, urethra and anal sphincter must be considered. If adequate surgical margin cannot be obtained without sacrificing such structure, neoadjuvent treatment with radiotherapy and/ or chemotherapy is an option. Primary tumor factors that are of prognostic importance include tumor size, tumor differentiation, depth of invasion or tumor thickness, lympho-vascular space involvement and surgical margin status.[10] Tumor involvement of distal urethra, vagina or perineum is also an adverse prognostic factor. The five year survival rate for node negative disease is much higher than those with the positive nodal disease.

None of the associated risk factors for vulval squomous cell carcinoma were present in our patient. Margin status at the time of resection of the vulvar cancer is the most powerful predictor of local vulvar recurrence, with an almost 50% recurrence risk with margins closer than 0.8cm.[11] Margin status does not, however, predicts survival. Local vulvar recurrence are likely in patients with primary lesions larger than 4 cm in diameter, especially if lympho-vascular space invasion is present.[12,13] Our patient was a case of vulvar carcinoma stage II and treated by modified radical vulvectomy followed by vulvar reconstruction in same sitting. This type of surgery was done for the first time in this set up successfully. Long term follow up is recommended for vulvar cancers after treatment. Every three months for one year, every six month for five year and annually afterwards.

Vulval health awareness campaign (VHAC) recommends that self examination of vulva should be promoted for all women on monthly basis for early detection of vulvar cancer. A careful pelvic examination and PAP smear screening must be done in

patients of vulvar carcinoma as these women have increased incidence of cervical and vaginal neoplasia. Biopsy of any suspicious vulvar lesion prior to empirical treatment is warranted.

CONCLUSION

Modified radical vulvectomy along with vulvoplasty in same sitting is beneficial to prevent distortion of vulva along with preservation of vaginal aperture for conjugal life.

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References

1. Hoffman MS, Stickles XB. Malignancies of the vulva. In: Jones HW III, Rock JA (eds) *Te Linde's Operative Gynecology*, 11th edn. New Delhi: Wolters Kluwer, 2015; p1141-79.
2. Sturgeon SR, Brinton LA, Devesa SS, Kurman RJ. In situ and invasive vulvar cancer incidences trends (1973 to 1987). Am J Obstet Gynecol. 1992;166(5):1482-5.
3. Levi F, Randimbison L, La Vecchia C. Descriptive epidemiology of vulvar and vaginal cancers in Vaud, Switzerland, 1974-1994. Ann Oncol. 1998; 9(11):1229-32.
4. Jones RW, Baranyai J, Stables S. Trends in squamous cell carcinoma of the vulva: the influence of vulvar intraepithelial neoplasia. Obstet Gynecol. 1997; 90(3):448-452.
5. Hussain SK, Madeleine MM, Johnson LG et al. Cervical and vulvar cancer risk in relation to joint effects of cigarette smoking and genetic variation in interleukin 2. Cancer Epidemiol Biomarkers Prev. 2008; 17(7):1790-9.
6. van Seters M, van Beurden M, de Craen AJM. Is the assumed natural history of vulvar intraepithelial neoplasia III based on enough evidence? A systemic review of 3322 published patients. Gynecol Oncol. 2005;97(2):645-51.
7. Kurman RJ, Toki T, Schffman MH. Basaloid and warty carcinomas of the vulva: distinctive types of squamous cell carcinoma frequently associated with human papillomaviruses. Am J Surg Pathol. 1993; 17(2):133-45.
8. Vilmer C, Cavelier-Balloy B, Nogues C, Trassard M, Le Doussal V. Analysis of alterations adjacent to invasive vulvar carcinoma and their relationship with the associated carcinoma: a study of 67 cases. Eur J Gynecol Oncol 1998; 19(1):25-31.
9. Oonk MHM, Hollema H, de Hullu JA, van der Zee AGJ. Prediction of lymph node metastases in vulvar cancer: a review. Int J Gynecol Cancer. 2006; 16(3):963-71.
10. Mitra S, Sharma MK, Kaur I et al. Vulvar carcinoma: dilemma, debates, and decisions. Cancer Manag Res. 2018; 10:61–8.
11. Heaps JM, Fu YS, Montz FJ, Hacker NF, Berek JS. Surgical- pathologic variables predictive of local recurrence in squamous cell carcinoma of the vulva. Gynecol Oncol. 1990; 38(3):309-14.
12. Podratz KC, Symmonds RE, Taylor WF. Carcinoma of the vulva: analysis of treatment failures. Am J Obstet Gynecol. 1982; 143(3):340-51.
13. Homesley HD. Management of vulvar cancer. Cancer. 1995; 76(10 suppl):2159-70.