

# Vaginal cancer and reconstruction: a 10-year follow-up observation of vaginectomy with genitocrural flap vaginoplasty for primary vaginal carcinoma

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## Summary

**Objective:** The incidence rate of vaginal carcinoma is gradually increasing and radical hysterectomy and vaginectomy have become popular treatments to avoid radiation therapy in young patients who wish to retain sexual function after surgery. **Materials and Methods:** The authors report a case of 10-year follow-up for primary vaginal carcinoma where vaginectomy with genitocrural flap vaginoplasty were performed to avoid radiation therapy in a young patient. Here, the authors present a case of a 42-year-old female with Stage II vaginal carcinoma who underwent surgery at West China Second University Hospital, Sichuan University, Chengdu, China. She presented with irregular vaginal bleeding, and by gynecological examination, a 4-5cm cauliflower-like nodule in the left lower part of the vaginal wall. After receiving twice neoadjuvant bleomycin and cisplatin chemotherapy with a good response, she underwent radical hysterectomy and vaginectomy with pelvic lymphadenectomy, bilateral ovaries preserved, followed by genitocrural flap that were used for vaginoplasty. Pathology revealed negative margins. After the surgery she was received combination chemotherapy again. Laser therapy was used for hair follicle of genitocrural flap for vaginoplasty and no postoperative infection or necrosis occurred. **Results:** After a 10-year follow-up observation, the woman did not reveal any local recurrence or distant metastasis and retained sexual function. The very satisfactory anatomical and functional outcome indicates that this technique merits further evaluation. **Conclusions:** The present authors came to the conclusion that radical hysterectomy and vaginectomy with genitocrural flap vaginoplasty are a reasonable option for patients with primary vaginal carcinoma who wish to retain sexual function after surgery.

**Key Words:** Vaginal cancer; Reconstruction; Radical vaginectomy; Genitocrural flap vaginoplasty; Sexual function.

## Introduction

The incidence rate of vaginal carcinoma is gradually increasing. The most common risk factor is human papilloma virus, and the main pathological type of vaginal carcinoma is squamous cell carcinomas. The main symptom is abnormal vaginal bleeding. The diagnosis is based on pathology. Vaginal carcinoma is staged by FIGO system and TNM staging. The prognostic factors are several and one of the important ones is lymph node metastasis; others are size of lesion, stage, age of patients, and so on. Vaginal carcinoma can be treated with surgery and radiotherapy, but radiotherapy has many side effects, especially in young women [1]

For many years, treatment consisted of radical procedures involving removal of the vagina, cervix, and uterus. Reconstructive surgery is essential for these patients, in order to achieve vaginal penetrative sexual intercourse [2]. Radical hysterectomy and vaginectomy have become popular treatments to avoid radiation therapy in young patients who wished to retain sexual function after surgery [3].

Here, the authors report a case of 10-year follow-up for

primary vaginal carcinoma where vaginectomy with genitocrural flap vaginoplasty were performed to avoid radiation therapy in a young patient.

## Case Report

A case of a 10-year follow-up assessed the efficacy of radical vaginectomy with genitocrural flap vaginoplasty for primary vaginal carcinoma. Here, the authors present a case of a 42-year-old female with Stage II vaginal carcinoma who underwent surgery at West China Second University Hospital, Sichuan University, Chengdu, China. She presented with irregular vaginal bleeding, and by gynecological examination, a 4-5cm cauliflower-like nodule in the left lower part of the vaginal wall. After receiving twice neoadjuvant bleomycin and cisplatin chemotherapy with good response, she underwent radical hysterectomy and vaginectomy with pelvic lymphadenectomy, bilateral ovaries preserved, followed by genitocrural flap which was used for vaginoplasty. Pathology revealed negative margins. After surgery the woman received combination chemotherapy again. Laser therapy was used for hair follicle of genitocrural flap for vaginoplasty and no postoperative infection or necrosis occurred. After a 10-year follow-up observation, she did not reveal any local recurrence or distant metastasis and retained sexual function. The very satisfactory

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anatomical and functional outcome indicates that this technique merits further evaluation. The author came to the conclusion that radical hysterectomy and vaginectomy with genitocrural flap vaginoplasty is a reasonable option for patients with primary vaginal carcinoma who wish to retain sexual function after surgery.

## Discussion

The incidence rate of vaginal carcinoma is gradually increasing and vaginal carcinoma can be treated with surgery and radiotherapy, but radiotherapy has many side effects, especially in young women. Radical surgery of primary vaginal carcinoma typically involves partial or complete resection of the vagina, and young patients in particular can experience sexual dysfunction after surgery. Radical hysterectomy and vaginectomy have become popular to avoid radiation therapy in young patients who wished to retain sexual function after surgery [4]. Vaginoplasty is mandatory for this population and multiple vaginal reconstructive techniques have been reported [5]. Here the authors attempted to determine whether the genitocrural flap is a feasible alternative to the genitocrural flap in vaginoplasty performed during radical surgery.

Vaginal reconstruction after radical surgery for primary vaginal carcinoma often includes a high risk of tumor recurrence. In the present case, the patient was clinically free of disease at her 10-year follow-up. This finding demonstrates the safety of genitocrural flap vaginoplasty during radical surgery. The authors note that the accurate selection of patient is important, who should be young and without involvement of organ outside the vaginal wall or metastasis to regional lymph nodes.

In the present case, genitocrural flap vaginoplasty was similar in terms of allowing a satisfaction sexual life, safety during surgery, and preventing tumor recurrence during the following-up period. Vaginal reconstruction after radical surgery appears to be an ideal option because it offers the following advantages: (1) relative ease of surgery, (2) no bowel disturbance, (3) fewer risks compared with sigmoid

colon vaginoplasty, for example, fistula, infection, and development of mucous adenocarcinoma, (4) preserve ovarian function, (5) satisfactory sexual intercourse and no excessive mucous secretion. The main problem the present authors experienced was with genitocrural flap vaginoplasty hair follicle, and in this case, they used laser therapy, with no postoperative infection or necrosis occurred.

The present authors came to the conclusion that radical hysterectomy and vaginectomy with genitocrural flap vaginoplasty are a reasonable option for patients with primary vaginal carcinoma who wish to retain sexual function after surgery.

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