

Can radiotherapy be a treatment option for elderly women with invasive vulvar carcinoma without radical surgery?

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Summary

Purpose of the investigation: To evaluate the impact of radiotherapy after limited surgery in vulvar carcinoma.

Methods: Between March 1980 and January 2000, 22 patients older than 60 years and suffering from invasive vulvar carcinoma were treated with limited surgery and radiotherapy at Gülhane Military Medicine Academy. These are the subjects of this review.

Results: The median age of the patients was 67 (range 60 to 78 years). Median follow-up was 35 months (range 12 to 60 months). Local recurrence rate was 18%. Median time to local failure was 12 months (range 8 to 14 months). Two patients with local failure also developed lung metastases. Five-year survival rate was 60% and cause-specific survival rate was 69%. No treatment delay or death related to treatment was observed.

Conclusions: Radiotherapy and conservative surgery can be an alternative to radical surgery with less morbidity in elderly patients.

Key words: Vulvar; Carcinoma; Radiotherapy; Surgery.

Introduction

The prevalence of vulvar carcinoma, found primarily in elderly women is approximately 4% of all gynecological carcinomas [1, 2]. Unfortunately this rate is increasing because of the advancing age of our female population. In Turkey, life expectancy for women has increased to 69.0 years for those born after 1990 [3]. This expectancy was far too low for the ones who were born before this date.

Radical vulvectomy with bilateral groin (inguinal and femoral) lymph node dissection is the standard therapy for carcinoma of the vulva [4-9]. Local control of the vulva has been excellent with this operation. Although this massive surgical approach has substantially improved survival rates it has been associated with a high level of morbidity. Because of this morbidity rate, we report the results of patients older than 60 years treated by conservative surgery and radiotherapy. The present study was undertaken to evaluate the impact of radiotherapy after limited surgery in vulvar carcinoma.

Patients and Methods

Between March 1980 and January 2000, 22 patients older than 60 years and suffering from invasive vulvar carcinoma were treated with limited surgery and radiotherapy at our institution and were evaluated for this review. All of the patients were referred to a radiotherapy center by various gynecological surgeons. All of the patients had unfavorable medical conditions which restricted radical surgery (91% of patients) or had resistance for radical vulvectomy and inguinal lymph node dissection (9% of patients). Informed consent had been obtained for each patient. The FIGO staging system was used [10]. The

pre-therapeutic procedure included general and gynecological history, physical examination and computerized tomography (CT) of the pelvis. Wide local excision and biopsy without nodal dissection were the surgical methods. Radiotherapy of the vulva and the groin was performed with a cobalt-60 unit or 6 MV X-rays. The reference isodose for the calculation of the beam was 85% at the maximum invasion depth of the tumor which was determined by CT scans. All patients received 50 Gy to the vulva and the groin with 2 Gy daily doses in five weeks. Parallel opposed anterior and posterior portals (loaded anteriorly) were used. Bolus material over the vulva was used in 11 patients. Early and late morbidities of the treatment were evaluated according to the European Organization for Research and Treatment of Cancer and Radiotherapy and Oncology Group morbidity scale [11]. After completion of radiotherapy patients were examined for three monthly periods by physical examination and pelvic CT. The primary end point of this study was to evaluate local control and survival for patients treated with limited surgery and external radiotherapy.

Results

The median age of the patients was 67 (range 60 to 78 years). Median follow-up was 35 months (range 12 to 60 months). All of the patients were postmenopausal. Except for one patient, all were multipara. The first symptom, duration between first symptom to diagnosis, histopathology and stage and type of surgery are summarized in Table 1. Three patients with FIGO II disease and one patient with FIGO I disease recurred locally. The characteristics of the patients who had recurrence are summarized in Table 2. Local recurrence rate was 18%. Median time to local failure was 12 months (range 8 to 14 months). Two patients with local failure also developed lung metastases. The five-year survival rate was 60% and cause specific survival rate 69%. No treatment delay or

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Table 1. — Characteristics of 22 patients treated with conservative surgery and radiotherapy

First symptom	vulvar mass	n = 9
	pruritus	n = 11
	ulceration	n = 2
Time to diagnosis (months)	0-6 months	n = 11
	6-12 months	n = 3
	>12 months	n = 1
Histopathology	Squamous	n = 21
	Adenosquamous	n = 1
Stage	FIGO I	n = 14
	FIGO II	n = 8
Localization	Labium majus	n = 17
	Labium minus	n = 3
	Frenulum	n = 1
Type of surgery	Biopsy	n = 13
	Wide local excision	n = 9

n: number of patients

Table 2. — Table 2. Characteristics of four patients who recurred

	Stage (FIGO)	Type of surgery	Margins	Thickness	Recurrence site	Bolus
Patient 1	I	Biopsy	< 8 mm	< 5 mm	Vulva	+
Patient 2	II	Biopsy	< 8 mm	> 5 mm	Vulva	+
Patient 3	II	WLE*	> 8 mm	> 5 mm	Groin	+
Patient 4	II	WLE	> 8 mm	> 5 mm	Vulva	-

*WLE: Wide local excision

death related to treatment was observed. Grade I, II, and III dermatitis were observed in 12, two, and four patients, respectively. Gentian violet application overwhelmed the dermatitis in all patients. Grade I and II diarrhea were observed in three patients. No vaginal stenosis or recto-vaginal fistula was observed.

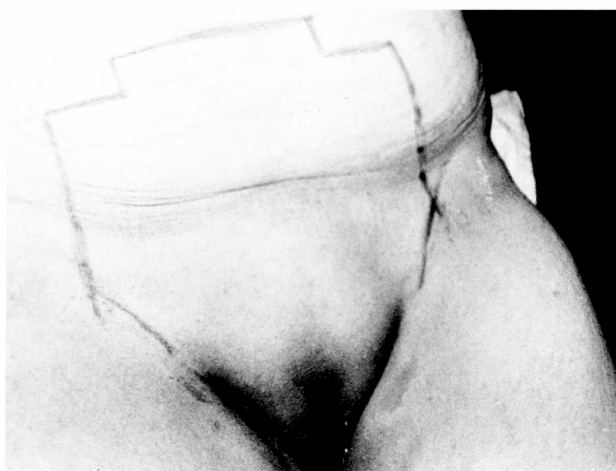


Figure 1. — Anterior radiotherapy field of a 61-year old patient after biopsy.

Discussion

Radical vulvectomy with bilateral groin lymph node dissection is curative for the majority of patients with survival rates reported to approximate 67-76% [4, 6, 8, 9]. The cure rates approach 90-95% for those patients who have resectable primary tumors and who are without evidence of metastatic disease in the nodes [4-6, 8, 9, 12]. Stage I and II carcinoma of the vulva tends to remain localized [13]. Surgical margins of less than 8 mm are more frequently associated with local recurrence [14]. Tumors larger than 2 cm or greater than 5 mm thickness are correlated with a higher incidence of local relapse [15, 16]. It is agreed in general radio-oncological principles that postoperative irradiation to the vulva is indicated after non-radical dissections of the primary tumor leaving close margins [17]. Perez *et al.* reported that after biopsy or local excision, local tumor control was 100% in 13 patients irradiated with doses higher than 50 Gy [13]. Faul *et al.* found that in a group of 62 patients (FIGO I-IV) adjuvant radiation improved the local control in patients with close or positive margins after surgery [18]. The application of the current biologic concepts dictates that the primary tumor should be completely removed (ideally with negative margins) and that subclinical disease be treated with irradiation doses of 45 to 50 Gy [19]. These data support our results with only four local recurrences.

Moreover, lymph node status is another important aspect which must be considered carefully. In a GOG (Gynecologic Oncology Group) study, analysis of 588 patients, the incidence of positive inguinal lymph nodes was about 19% in patients with tumor less than 2.0 cm in diameter, 31% with 2.1 to 3.0 cm, and 40% to 54% in patients with larger lesions [15]. This study showed that clinical examination of the lymph node status resulted in a considerable underestimation of the tumor stages in nearly one-fourth of all patients [15]. This is what led us to treat the groin with radiotherapy. Vulvar radiation fell out of favor in the past because of the reported poor tolerance and inadequate technique [20]. Stehman reported unsatisfactory results using elective irradiation of the regional nodes versus node dissection [21]. But Koh and McCall [22, 23] separately expressed the importance of lymph node depth and pretreatment CT scans for adequate irradiation. Perez *et al.* reported 10% of nodal recurrence in patients treated with photons without electron boost [13]. Petreit *et al.* also reported a 91% control rate for patients having inguinal-femoral irradiation [24]. Homesley *et al.* demonstrated the value of pelvic lymph node irradiation in 114 patients [25]. Schulz *et al.* prophylactically irradiated the inguinal lymph nodes in 38 patients with a dose of 45-60 Gy, and reported 2.6% nodal recurrence [26]. Pao *et al.* described a group of patients with vulvar cancer treated with conservative surgery and irradiation [27]. Inguinal lymph node recurrence was observed in only one patient and the authors recommended 50 Gy to clinically negative lymph node regions at risk [27]. Late complications of lymph node irradiation are manageable [28]. In the absence of previous groin surgery, the incidence of lymphedema is very low [28].

Conclusion

As a result, the high rate of complications for surgery becomes more difficult to accept when one notes that 70-80% of patients have negative nodes. Furthermore, older age must be considered when treating patients who reach the autumn of their life span. Although we have not presented a large series of patients, we suggest that radiotherapy and conservative surgery can be an alternative to radical surgery with less morbidity in elderly patients.

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