CARCINOMA OF THE VULVA – A MALAYSIAN EXPERIENCE

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SUMMARY

The technique of radical vulvectomy with lymphadenectomy in which primary skin closure of the large defect is achieved is described. Experience with this operative technique at the University Hospital, Kuala Lumpur from 1968 to 1980 is reviewed. The technique allows for wide clearance of the tumour and of regional lymphatic channels and nodes in continuity. We have been impressed by the good immediate results and at the primary skin closure achieved in all our cases.

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INTRODUCTION

Carcinoma of the vulva is a relatively rare tumour and accounts for only 4 percent of all primary malignancies of the genital tract. One of the major problems in radical surgery for carcinoma of the vulva is that of adequate skin closure and consequent prolonged hospitalisation due to delayed wound healing. This study reviews 16 consecutive cases of primary carcinoma of the vulva seen in the University Hospital, Kuala Lumpur from 1968 - 1980 and describes our experience with radical vulvectomy using a technique aimed at achieving primary skin closure.

MATERIALS AND METHODS

During the period of March 1968 when the gynaecological Ward of University Hospital was opened, to July 1980, 16 patients with primary carcinoma of the vulva were managed at the University Hospital. Of these 16 patients, 12 were initially seen in other hospitals all over the country and were referred here for further management. All cases, included in this study, were of primary carcinoma of the vulva. Four other cases of secondary carcinoma in the vulva were excluded from this series. Two of these were secondaries from the cervix, one from the ovary, and the other from a hypernephroma of the kidney.

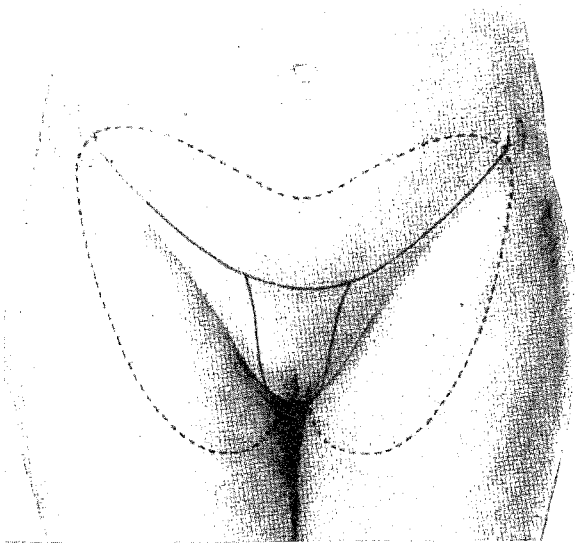

Fig. 1 Skin incisions for radical vulvectomy. The dotted lines indicate the limits of the superficial groin dissections (Twombly, G H: Cancer 6: 520).

No treatment was instituted in one patient because the primary lesion was far too extensive and the patient was sent home with analgesics. Another patient with an advanced lesion was subjected to radiotherapy.

All the remaining 14 cases were subjected to radical vulvectomy.

OPERATIVE TECHNIQUE

The patient is placed supine on the operating table with the thighs abducted. A transverse crescentic skin incision is made from one anterior superior iliac spine to the other. The skin incision is deepened to reach the plane between the superficial subcutaneous fat and Scarpa's facia with its underlying deep layer of fat and lymphatic channels and nodes. An upper skin flap is created and elevated in this plane to a level mid way between the symphysis and the umbilicus. The lower skin flaps are similarly raised in the same plane by making vertical incisions on both sides of the mons veneris and the flaps are dissected down to the level of the apex of the femoral triangle. The deep tissues of the lower abdominal wall and upper thighs are thus exposed.

The deep tissues of the lower abdomen are dissected off the external oblique aponeurosis down to the Poupart's ligament and the periosteum of the

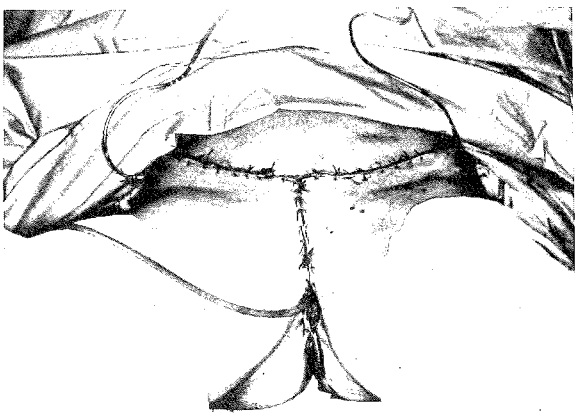

Fig. 2 Primary skin closure achieved at conclusion of operation. Note the radivac drains on either side used for post-operative suction drainage.

symphysis pubis. In the groin dissection all the fatty and areolar tissues of the femoral triangle are dissected from the underlying fascia lata of the upper thigh starting from the lateral aspect and dissecting medially. The femoral sheath is opened and the lymph nodes and areolar tissue carefully cleaned from the femoral vessels and femoral canal. The saphenous vein is doubly ligated and divided at its junction with the femoral veins. The entire mass of fat with lymphatic channels and nodes thus mobilised is swung up and medially to the mons veneris to be completely dissected in continuity with mons and vulva later.

The deep pelvic nodes are approached retroperitoneally by incising the external oblique fascia and the internal oblique at the level of the external inguinal ring and parallel to the Poupart's ligament. The inferior epigastric vessels are divided and the peritoneum retracted medially. The external iliac, internal iliac and external oblique fascia are sutured, taking care to prevent any femoral hernia. The transverse abdominal skin incision is now closed with interrupted mersilk sutures leaving a polythene radivac catheter on each side for post-operative suction drainage (Fig. 2). To save operating time, the dissection of the abdominal wall, the femoral triangles and the deep pelvic nodes are performed simultaneously by two surgeons, each working on either side of the patient.

The patient is next placed in a lithotomy position. Vertical incisions on each side of the mons are extended downwards along the labiocrural folds

Fig. 3 The excised operative specimen with attached inguinal and femoral lymph nodes removed enbloc.

and joined posteriorly by a transverse incision just anterior to the anal margin. The vaginal incision is made circumferentially just within the muco-cutaneous junction. The entire mass that has been dissected earlier is now swung downwards and excised completely with the vulva and lymph channels, nodes and surrounding fat in continuity. The vulval skin and vaginal mucosa are sutured with interrupted chromic catgut while the skin in the mons is sutured with interrupted mersilk sutures.

The primary skin closure achieved at the conclusion of the operation is shown in Fig. 2. The removed operative specimen is depicted in Fig. 3.

All patients were put on antibiotics on the day before the operation and continued for one week. They were also put on continuous bladder drainage for seven days.

RESULTS

The mean age of the women in our series was 59.6 years. The youngest patient was 42 years old and the oldest was 82 years.

The disease did not show any relation to parity.

There was no racial preponderance. There were 3 Malays (18.7 percent), 8 Chinese (50.0 percent) and 5 Indians (31.3 percent). This is similar to the overall racial distribution of all gynaecological patients admitted to the hospital during the same period (Table I).

All the patients came from the lower socio-economic group. The majority were housewives, with husbands who were labourers, farmers or odd-job workers.

Diabetes, hypertension and leukoplakia vulvae were found to be commonly associated conditions that were present (Table II).

TABLE I
INCIDENCE OF CARCINOMA OF THE VULVA BY RACE
(UNIVERSITY HOSPITAL 1968 - 1980)

Race	No.	%	Racial distribution of all gynaecological admissions
Malays	3	18.7	18.1
Chinese	8	50.0	51.7
Indians	5	31.3	27.3
Others	0	0	2.9
Total	16	100	100

Vulval growth and pruritus vulvae were the common presenting symptoms (Table III). In one patient, there were no local symptoms. She was brought into hospital as a phychiatric case and later proved to have tertiary syphilis. The vulval growth was found incidentally.

TABLE II
INCIDENCE OF ASSOCIATED DISEASES IN CARCINOMA VULVA

Diseases	No	%
Diabetes	6	37.5
Hypertension	4	25.0
Leukoplakia vulva	3	18.7
Syphilis	1	6.3
No associated Disease	2	12.5
Total	16	100.00

TABLE III
CARCINOMA VULVA - PRESENTING SYMPTOMS

Symptoms	No	%
Vulva growth	12	75.0
Pruritus vulvae	10	62.5
Ulceration/bleeding per Vagina	5	31.3
Pain	2	12.5
"Lump" in groin	2	12.5
Dysuria	2	12.5
Urinary retention	1	6.3
Vaginal discharge	1	6.3
Edema of the legs	1	6.3
Bleeding per rectum	1	6.3
No symptom	1	6.3

TABLE IV
CARCINOMA VULVA —
TIME INTERVAL BETWEEN ONSET OF SYMPTOMS AND DIAGNOSIS

Time interval (months)	No.	%
less than 6	9	56.1
6 to 12	4	25.0
12 to 18	1	6.3
18 to 24	1	6.3
more than 24	1	6.3
Total	16	100

A study of the time interval between the onset of symptoms and diagnosis of the disease is as shown in Table IV. It is apparent that 50 percent of the patients sought medical opinion after 6 months of onset of symptoms. More than 50 percent of them presented with advanced lesions i.e. in Stages III and IV (Table V).

TABLE V
CARCINOMA VULVA —
STAGE OF DISEASE AT TIME OF PRESENTATION (FIGO 1970)

Stage	No.	%
I	2	12.5
II	5	31.3
III	7	43.7
IV	2	12.5
Total	16	100

Lymph node involvement was studied. In 14 patients, the histology of the inguinal lymph nodes was available for analysis. Table VI shows the correlation between clinical assessment and histological involvement of the inguinal lymph nodes for metastasis. We found that it is difficult to predict lymph node involvement from clinical examination per se.

In 12 cases, the histology reports of the removed pelvic lymph nodes were available for analysis. In 2 other patients pelvic lymph node dissection was not carried out. Table VII shows the relationship between inguinal and deep pelvic node involvements with secondary deposits. This shows that patients with positive inguinal lymph nodes have a high chance of involvement of pelvic nodes. There were no cases of pelvic node metastasis without involvement of the inguinal nodes.

TABLE VI
CARCINOMA VULVA —
CORRELATION BETWEEN CLINICAL AND HISTOLOGICAL INVOLVEMENT OF INGUINAL LYMPH NODES FOR METASTASIS

Clinical Assessment	Histological + ve for metastasis	Histologically -ve for metastasis	Total
Not palpable	0	1	1
Palpable but not suspicious	4	2	6
Clinically suspicious	5	2	7
Total	9	5	14

TABLE VII
CARCINOMA VULVA —
RELATIONSHIP BETWEEN INGUINAL AND DEEP PELVIC NODE INVOLVEMENT*

	No. with pelvic node metastasis	No. without pelvic node metastasis	Total
Inguinal nodes + ve for secondaries	5	2	7
Inguinal nodes − ve for secondaries	0	5	5
Total	5	7	12 *

* in 2 other patients pelvic lymphadenectomy was not carried out.

In all the 14 cases, who had radical vulvectomy by the technique described above, primary skin closure was possible, and skin healing was good in over half the cases. In the remaining cases there was delay in wound healing, usually near the mons, this was due to infection or to excessive tension in uniting the skin edges. One patient had a large area of metastasis in the groin skin. In addition to the radical vulvectomy, she had excision of groin skin and rotation flap skin grafting undertaken.

The mean duration of hospital stay after radical vulvectomy was 62 days. The shortest was 33 days and the longest was 125 days.

There were no primary operative deaths with this

technique in our series. Five patients never returned for follow-up after discharge. These were patients living in other states in Malaysia and were therefore, lost to follow-up. The remaining 9 patients have been followed up for periods varying from 1 to 6 years. Four of these patients had both inguinal and pelvic node metastasis; 1 died within 6 months; 2 had local recurrences within 8 months and were treated with radiotherapy; the fourth is alive and well 1 year later with no evidence of recurrence. Five patients had no lymph node metastasis; 3 of these have up to now been followed up for 6 years, 1 for 5 years and 1 for 3 years respectively. These latter 5 patients are now alive and well with no evidence of recurrence.

DISCUSSION

Carcinoma of the vulva is unsuitable for radiotherapy as a primary method of treatment, because the minimal lethal dose for the tumour cells is also liable to produce necrosis and sloughing of adjacent normal vulval tissues. As the vulva is provided with a rich lymphatic drainage, [1] which is surgically accessible, radical vulvectomy, with removal of the primary and secondary groups of lymph nodes in continuity, remains the primary mode of treatment for carcinoma of the vulva. The most difficult problem that gynaecologists face in radical vulvectomy is securing primary wound healing in the groin. If this is obtained, both morbidity and length of hospitalisation will be reduced. [2] Modifications of the Basset operation have been advocated by other workers. [1,3,4] However, with these methods, primary skin closure is not often possible. Thus Way [1] reported an operative mortality of 19 percent. The operative technique that we have described, was advocated by Twombly [2] and subsequently by Ulfelder. [5] The technique allows for wide clearance of the tumour site and gives excellent operative exposure for dissection and removal, in continuity, of inguinal, femoral and pelvic lymph nodes. [6] Although we were able to achieve primary skin closure in all cases and used suction catheter drainage to prevent haemotoma formation and sepsis, some of our patients had varying degrees of marginal necrosis of the skin flaps; but in all those cases, the resulting defects healed without skin grafting. This problem arises mainly because the surgeon is operating in a dirty field, on ulcerated and infected tumours, leading to contamination and infection of the suture sites, which results ultimately in tissue necrosis and skin separation. Although we used pre-and post-operative antibiotic therapy to reduce the severity of the infection, it did not eliminate it entirely.

When there is metastasis to the pelvic lymph nodes, the absolute 5-year survival rate following radical vulvectomy and pelvic lymphadenectomy is between 12.5 percent [7] and 18 percent. [8] When lymph nodes metastasis are confined only to the superficial group of nodes, Ulfelder [5] had a 5 year cure rate of 79 percent. On the other hand, if both the superficial and deep pelvic nodes are free of metastatic deposits, the 5-year survival rate is 86 percent. [7]

We are unable to arrive at a 5-year survival rate for our patients, because of the poor follow-up. However, it is worthwhile noting that the 5 patients who are alive and well, 3 to 6 years after the surgery, all presented in the early stages of the disease, with no lymph node metastasis. Thus, early diagnosis and surgery is essential for optimal survival.

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