

# ROLE OF SURGERY IN THE TREATMENT OF CANCER OF THE CERVIX

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## ABSTRACT

Of the four treatment modalities of invasive cancer of the cervix, surgery and radiotherapy remain the most effective. Surgery is preferred for microinvasive cancers. For stages 1B to 2B, surgery appears to have an edge over radiotherapy, whereas radiotherapy is more widely used for the more advanced cases.

**Keywords:** Role of Surgery, Cervix Cancers.

SINGAPORE MED J 1990; Vol 31: 253 - 254

## INTRODUCTION

Cancer of the uterine cervix may be divided into two categories - pre-invasive and invasive cancers. Pre-invasive cervical cancers are treated largely by local ablation of the tumour. Methods of ablation are diathermy, laser, thermocoagulation, cryotherapy, cold knife conization, laser conization or simple hysterectomy. It is of vital importance to exclude invasive cancers and to obtain accurate histological diagnosis by colposcopy and appropriate biopsy before treatment is given. This paper will address the role of surgery in the treatment of invasive cancers of the cervix.

There are 4 main modalities of treatment for the treatment of invasive cervical cancers:- Surgery, Radiation, Chemotherapy and Immunotherapy. Surgery and Radiation remain the two established methods of treatment offering a high cure rate of about 85% for the early stage. Chemotherapy is used mainly for advanced lesions with distant metastasis. Recently it is being used as post-operative adjuvant therapy in cases who are at high risk of recurrence. Chemotherapy is also being given prior to surgery to reduce the tumour bulk. These uses of chemotherapy are still being studied to determine if they offer any additional benefit to patients in terms of cure rate. Immunotherapy again is used on a research basis.

## ROLE OF CURATIVE SURGERY

Radical hysterectomy and lymphadenectomy has established itself as one of the 2 methods of treating

early invasive cancers of the cervix ie. stages 1B and 2A and selected 2B. Curative surgery is in the form of Wertheim's operation which involves radical hysterectomy and lymphadenectomy excising en block the uterus, its appendages, the entire parametria and the upper one-third of the vagina. Lymphadenectomy involves the excision of the common iliac nodes (anterior and posterior chain), the external iliac, obturator, internal iliac and presacral nodes. Thoroughness of the lymphadenectomy will influence the survival rates of primary curative radical surgery.

It offers as high a cure rate as radiotherapy, 85-90% for stage 1B and 75% for stage 2 cases. The advantages of surgery are patient preference, preservation of the vagina for sexual function and preservation of the ovary. Radiation on the other hand is often associated with marked injury to the vagina resulting in impaired sexual function. Radical hysterectomy is not without other sequelae. About 4% of patients will suffer severe bladder impairment and about a third suffer from constipation(1).

The place of radical surgery for stage 2B cases is still controversial. Those who perform radical hysterectomy on these cases report a better 5-year survival compared with radiotherapy (1-3). My experience with over 250 cases (of which 40% are stage 2B cases) also supports performing radical surgery on 2B cases. The FIGO staging is imprecise as it is based on clinical findings. The diagnosis of stage 2B is based on the feeling of thickening and nodularity of the parametrium by digital palpation. Thickening and nodularity of the parametria may be due to endometriosis or inflammation or other abnormalities and not tumour infiltration. From the author's experience only about 20% cases of clinical stage 2B cases actually had parametrial infiltration and the surgical margins were all free of tumour(1). An additional advantage for operating on stage 2B cases is a better assessment of risk factors which may result in modified treatment and better survival. In Singapore, approximately 150 new cases of invasive Ca cervix are seen yearly. About 1/2 of these are suitable for surgery.

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### **SURGICAL TREATMENT OF STAGE 3 AND 4 CASES**

Curative Radical surgery may still be applicable to stage 3A cases where the tumour has infiltrated the lower 1/3 of the vagina. In this case the entire vagina has to be excised, in addition to radical hysterectomy and lymphadenectomy. Surgery is not suitable for stage 3B cases where the tumour has reached the pelvic side wall. These cases should be treated with radiotherapy.

As for stage 4 cases where the bladder mucosa or the rectal mucosa has been infiltrated without evidence of distant metastases or involvement of the pelvic side wall, anterior or total pelvic exenteration is another option. The 5-year survival rate is about 40% (4).

However before such an operative procedure is offered to the patient, it is important that the necessary post-operative support team be available. The patient must be told of the consequences, especially the long-term management of the stoma. In practice most exenterations are performed for central recurrence following radiotherapy where further irradiation should not be given because of unacceptable complications such as radiation necrosis and fistulae.

### **SURGICAL TREATMENT OF STAGE 1A CASES**

The treatment of microinvasive carcinoma of the cervix should be individualized. Diagnosis should be based on a cone biopsy. Those with infiltration 3 mm or less with no tumour embolization of lymph and vascular spaces may be treated with a simple hysterectomy as the risk of lymph node metastasis in such cases is believed to be negligible. Those with depth of infiltration of more than 3 mm and/or presence of tumour emboli may be treated with an extrafascial hysterectomy (extended hysterectomy). Sampling of the nodes may be carried out on enlarged nodes.

### **POST-OPERATIVE ADJUVANT RADIOTHERAPY**

About 25% of stage 1B and 2B cases will have high risk factors for recurrence such as lymph node metastasis, tumour embolization of lymph vascular spaces, parametrial infiltration and surgical margin infiltration. For such cases post-operative adjuvant external irradiation is believed to better survival rates. It is important therefore that the Pathologist studies and reports these risk factors accurately. It is obvious that the percentage of patients subjected to adjuvant radiotherapy should be kept to a minimum, as it carries added morbidity.

### **ADJUVANT SURGERY**

An extrafascial hysterectomy has been advocated in cases of bulky stage 1 and 2 tumours treated with

irradiation (5). It is believed that for such cases a post-radiation extrafascial hysterectomy may reduce the rate of central recurrence. On the other hand there are others who would treat these cases with primary radical hysterectomy. It may be advisable for the less experienced to opt for pre-operative irradiation to shrink the tumour before surgery.

### **SURGERY FOR RECURRENCES**

Central pelvic recurrences may be amenable to surgery provided the tumour is free of the pelvic side walls and the tumour has not spread out of the pelvis. Pelvic exenteration (anterior or total) may be appropriate provided the patient is fit, young and well motivated.

The 5-year salvage rate for pelvic exenteration is reported to be in the region of 20-40% with an operative mortality of about 5-10%. Morbidity, such as the "empty pelvis" syndrome and bowel obstruction from adhesion to the raw pelvis is high.

Localized recurrences may also be treated by wide local excision followed by post-operative external irradiation, if the patient has not had radiation treatment previously. This may be a more acceptable option for patients.

### **PALLIATIVE SURGERY**

Surgery not only has a place in curing patients with cervical cancer, it also has a place in cases beyond cure. For those cases suffering severe pain, surgery may be applied to relieve the patient of severe pain by severing the pain nerve pathways. Ureterostomy and colostomy may alleviate the suffering of urinary incontinence and faecal incontinence. Insertion of double J stents up the ureter is sometimes carried out to relieve ureteric obstruction.

Much wisdom and judgement is needed to decide if such palliative treatment is to be beneficial to the patient. For such cases the patients attitude and desires should be carefully taken into consideration.

Local excision of certain secondaries such as neck glands can improve the quality of life in some cases. Similarly local excision of secondaries may sometimes be beneficial to the patient.

### **CONCLUSION**

Surgery remains as one of the two main pillars in the treatment of cervical cancers. In Singapore, it is the preferred option for early cervical cancers. About half of new cases in Singapore are suitable for curative surgery.

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