

## MICROSCOPIC OVARIAN METASTASIS OF UTERINE CERVICAL CANCER

DAVE K. S. ● KAPADIA A. S. ● DESAI A. D. ● MANKAD M. M.

### SUMMARY

Four hundred seventy three cases of carcinoma of uterine cervix with FIGO stage IB to IIB were initially treated with radical abdominal hysterectomy at Gujarat Cancer & Research Institute from 1977 to 1992. In these cases 198 were in stage IB, 69 were in stage IIA and 206 cases were in stage IIB. There were no ovarian metastases out of 442 squamous cell carcinoma. The incidence of ovarian metastases in the remaining 31 cases of adeno carcinoma presenting as any of its sub-type like adenosquamous, clear cell tumour or glassy cell carcinoma was 3.22%. Patients with ovarian metastases had deep stromal invasion and lymphatic and vascular permeation but there was no evidence of corpus invasion and pelvic lymph node metastases. It is safe to preserve the ovaries with squamous cell carcinoma but not with adenocarcinoma or adenosquamous carcinoma.

### INTRODUCTION

Now-a-days, it is routine to preserve the ovaries at the time of radical abdominal hysterectomy. When post operative radiotherapy following surgery is necessary, ovarian transposition out of the pelvic radiation field has been

attempted. It is safe to preserve the ovary in squamous cell carcinoma of cervix. However, many authors have recommended not to preserve ovaries in cases of adenocarcinoma because of the increased chance of ovarian metastases.

The aims of our study are to analyse the characteristics to metastatic ovarian lesion and primary lesion and to determine possibility of preservation of

---

*Dep.t of Gyn. Oncology, Gujarat Cancer & Research Institute, Ahmedabad.  
Accepted for Publication in March '95.*

ovary in treatment of adenocarcinoma, adenosquamous carcinoma as well as squamous cell carcinoma of uterine cervix.

#### MATERIALS AND METHODS

Four hundred and seventy three cases had undergone direct radical abdominal hysterectomy and pelvic lymphadenectomy between the years 1977 to 1992 at Gujarat Cancer & Research Institute, Ahmedabad. A retrospective analysis of records including histopathological report has been made. Of the 473 cases, 198 were stage IB, 69 were stage IIA and 206 were stage IIB. Histopathological sub-type of these 473 cervical cancers were squamous cell carcinoma, 442 pure adenocarcinoma 17, adenosquamous carcinoma 10, clear cell carcinoma 3 and one glassy cell tumour, one of the 473 cases had ovarian metastases macroscopically. It is routine in our pathology department to examine the ovary by cutting it longitudinally along its maximum diameter and by preparing it by routine haematoxylin and eosin staining.

#### RESULTS

Only 1 of the 473 cervical cancer cases showed ovarian metastases. It was FIGO stage IIB. None of the cases of squamous cell carcinoma showed ovarian metastases (Table I), Total 31 patients had adeno or adenosquamous carcinoma. Of these 1 had ovarian metastases (3.22%) as shown in Table II. 1 out of 10 (10%) cases of adenosquamous carcinoma showed ovarian metastases. She was 25 years old gravida 3, para 3 clinical stage was IIB, Histological type was poorly differentiated, nuclear grade III, adenosquamous carcinoma. Her ovaries were macroscopically normal at radical hysterectomy but right ovary showed metastatic carcinoma microscopically. (Table - 3) Cervical stromal invasion was 12 mm and uterine invasion was absent. There was presence of lymphatic, vascular and neural permeation, parametrial invasion was present, but there was no evidence of pelvic lymph node metastases. She was advised post operative radiotherapy but she refused it and developed central recurrence and died of uraemia within 6 months of surgery.

Table I  
FIGO staging and Ovarian Metastases

FIGO Stage	No. of patients	Ovarian Metastases
Total No. of patients.	473	1 (0.21%)
Stage I B	198	0
Stage II A	69	0
Stage II B	206	1 (0.49%)

**Table II**  
**Histological Types and Ovarian Metastases**

Histology	No. of patients	Ovarian Metastases
1. Squamous Cell Carcinoma	442	0
2. Adeno Carcinoma	31	1 (3.2%)
i) Adeno Carcinoma	17	0
ii) Adenosquamous Carcinoma	10	1 (10%)
iii) Clear Cell Carcinoma	3	0
iv) Glassy Cell Carcinoma	1	0

**Table III**

Detailed Histopathological Report of patient with Ovarian Metastases.

1. Histological type	Adenosquamous Carcinoma, poorly differentiated, nuclear grade III
2. Side of Ovarian Metastases	Right
3. Size of lesion in ovary (mm)	8
4. Site of Metastases	Hilum
5. Tubal Metastases	Absent
6. Corpus Invasion	Absent
7. Lymphatic, vascular & Neural permeation	Present
8. Parametrial invasion	Present
9. Pelvic lymph node Metastases	Absent

### **DISCUSSION**

In our study only one case (0.21%) of 473 cervical cancers showed ovarian metastases. The lesion was microscopic and located only in hilum of ovary. It was clinical stage IIB.

Mac-call et al (1958) first advocated conservation of ovary in radical abdominal hysterectomy. As shown in table IV ovarian metastasis in squamous carcinoma is rare. We had no case. Yagi (1955) Webb (1975) and Parente et al

Table - IV

## Incidence of ovarian metastases in cervical carcinoma in different series

Authors	Incidence of Ovarian Metastases ( % )	Histological Type
1. Yagi	0	Sq
2. Webb	0	Sq + Ad
3. Parente	0	Sq
4. Beltzer	.5	Sq.
5. N. Toki	.19	Sq.
	5.5	Ad.
6. Tabata	0	Sq.
	0	Sq.
7. Kjorstand & Bond (1984)	1.3	Ad.
8. Kaminski & Norris (1984)	6.2	Ad.

Sq = Squamous Cell Carcinoma  
 Ad = Adenocarcinoma  
 Ad. Sq = Adenosquamous Carcinoma

(1964) reported no metastasis with squamous histological type. Beltzer et al (1981) observed 0.5% ovarian metastasis and Toki et al (1991) observed 0.19 ovarian metastasis with squamous cell carcinoma. However, it is more frequent to observe ovarian metastasis with adenocarcinoma. It ranges from 1.3% (Kyorstand and Bond 1984) to 12.5% (Tabata et al 1986). In our series we reported 3.22 ovarian metastasis with adeno or adeno squamous carcinoma. Nahhas et al (1977) reported ovarian metastasis with glassy cell carcinoma. Fusi et al (1989) reported a case of ovarian metastasis following radical hysterectomy for stage

IB adenocarcinoma of cervix.

Corpus invasion may be one of the risk factors for ovarian metastasis for cervical adenocarcinoma Tabata et al (1986). In our patient metastatic lesion was found in ovarian hilus and not in superficial cortex. She had lymphatic & vascular permeation. Therefore, ovarian metastasis in our case seemed to be caused by lymphatic or vascular spread and not spread through the transtubal route.

In conclusion, it is safe to preserve ovary with squamous cell carcinoma but not safe to preserve with adeno or adenosquamous carcinoma.

## REFERENCE

1. Beltzer J. Lohe K.J. Kopacke W & Zander J. *Geburtshilfe Frequenheilkd* : 41 : 672 - 1981
2. Fusi L., Ong c and Gordon H. 9 : 340,1989.
3. Kyorstand K.E., and Bond B. *Am J. Obstet Gynec* : 150:297-1984.
4. Mac-call, M.L., Keaty, E.C., and Thompson, J.D., *Am. J. obstel Gynec.* 15:590: 1958.
5. Nahhas, W.A., Abt. A.B. and Mortal R. *Gynec. Onco* :5 : 87;1977.
6. Parente J.J. Silberblatt W and Stone M. *Am. J. obstet Gyne.* : 90 : 1322; 1964.
7. Tataba M. Inchinoe K., Sakuragi N., Shijnay Y., Yamaguchi., and Mabuchi Y. *Case report Brit J.obset Gynec* : 93 : 1969 - 1986.
8. Toki N., TsukamotoN., N Kakut., Toh N., Saito T., Kumurat K., Matsakuma K., Nakono K., *Gynec. Oncol.* : 41 ; 4651; 1991.
9. Webb. G.A., *Am. J. Obstet : Gynec* : 122: 476 - ;1975.
10. Yagi, H. *Am. J. obstet Gynec.* : 69 : 33 ; 1955.