

Synchronous and metachronous extrapelvic metastases of cancer of the cervix: a study of prognosis and palliation

F. L. Ampil¹, M.D.; G. Caldito², Ph.D.

¹Departments of Radiology and ²Biometry, Louisiana State University Health Sciences Center Shreveport, Louisiana (USA)

Summary

Thirty-eight women with cancer of the cervix and extrapelvic metastases (EPM) were retrospectively reviewed with respect to prognosis and responses to palliative radiotherapy. Seventeen patients had synchronous EPM and 21 individuals displayed metachronous metastatic disease outside of the pelvic cavity. A meaningful difference was not revealed ($p = 0.11$) in the comparison of the two groups' 2-year survival rates. However, this small retrospective review highlighted the efficacy of radiotherapy administered for palliation to this cohort of patients.

Key words: Extrapelvic metastases; Cervical cancer.

Introduction

FIGO stage IV-B cancer of the cervix (CC) includes cases of extrapelvic metastases (EPM). This disease condition, EPM, is distinctly uncommon, with usually no more than 5% of CC patients being involved [1-4]. The traditional aim of treatment in these individuals is the preservation or provision of an acceptable quality of life.

The purpose of this retrospective study was to compare the survival of CC patients with synchronous EPM to that of women with metachronous metastatic disease outside of the pelvic cavity. The achieved palliation with the application of radiotherapy (RT) in this subgroup of patients was also investigated.

Materials and Methods

We reviewed the tumor registry data base of all women treated by radiation for CC between March 1980 and April 1997 at our institution. Thirty-eight patients with EPM were divided into two subgroups depending on whether EPM was documented at the time of diagnosis of CC (synchronous tumors, 17 patients) or during the course of follow-up (metachronous lesions, 21 patients).

Information recorded from each patient included age, clinical manifestations of disease, total RT dose given, and treatment response. Extent of the primary disease was determined by physical examination and/or computed tomography of the abdominal and pelvic cavities.

Megavoltage teleirradiation was from either a cobalt-60 or a 6 million volt linear accelerator; the technique of RT when used for locoregional disease control was identical to that in a previous report [5]. On the other hand, when RT was applied for local palliation of EPM or CC, an abbreviated course (30 Gy/10 fractions) was usually prescribed and given through opposed anterior and posterior or lateral treatment portals.

Response to treatment was assessed at the time of completion of RT or several months afterwards. Survival was calculated from diagnosis of EPM to death or last follow-up evaluation and expressed as crude survival rates. The Fisher's exact and the log-rank tests were used to determine the significance

of comparisons; probability values of 0.05 or less were considered statistically significant. The follow-up was complete for all patients.

Results

Of the 1,214 women with CC during the 17-year period at the Louisiana State University Health Sciences Center in Shreveport, 38 (3%) developed EPM. Such neoplastic secondaries appeared synchronously (1.4%) or metachronously (1.7%). The metachronous tumors were detected within two years of diagnosis of CC in 19 of the 21 women (91%) in that group. The overall mean age was 49 (range 23-86) years; nine patients (24%) were younger than 40 years. At the time of establishment of CC, the primary tumor was confined to the cervix (4 patients), involved the parametrium (10 patients), pelvic wall (22 patients), or the bladder causing a vesicovaginal fistula (1 patient); one individual possessed posthysterectomy recurrent tumor within the pelvic cavity. As shown in Table 1, extrapelvic tumor was often in the lymph nodes or ossei.

Effectuated palliation in the majority of the evaluable patients is presented in Table 2.

The median survival was significantly better in women with synchronous EPM compared to that of patients with metachronous extrapelvic disease (11 months, versus 5 months respectively $p = 0.035$); the corresponding 2-year crude survival rates were 24% and 5%, $p = 0.11$ (Figure 1).

Table 1. — Sites of extrapelvic metastasis of cancer of the cervix.

Lymph nodes*	(15)	40%
Bone	(14)	37%
Lung	(5)	13%
Liver	(4)	11%
Brain	(2)	5%
Other**	(10)	26%

*Para-aortic, mediastinal, or supraclavicular nodes;

**Duodenum, omentum, umbilicus, kidney, psoas muscle, pleura, or pericardium.

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Table 2. — Results.

Symptoms and Signs	Pretreatment	Post-treatment*		
		CR	PR	NR
Pain ^a	(7)**	(6)	-	(1)
Dyspnea	(1)	(1)	-	-
Bleeding ^b	(3)	(2)	-	(1)
Motion impairment	(4)	(4)	-	-
Tumor	(3)	-	(3) ^c	-

*CR = Complete response; PR = Partial response; NR = No response; ** () refers to the number of evaluable patients; ^aback or hip pain; ^bBleeding primary or metastatic (Sister Mary Joseph's nodule) tumor; ^cReduction in size of pulmonary or liver metastasis.

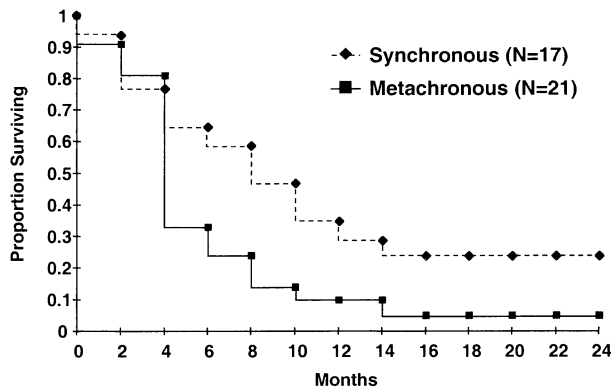


Figure 1. — Survival of patients with cancer of the cervix and synchronous or metachronous extrapelvic metastasis.

Discussion

EPM in the present study localized more frequently in the lymph nodes away from the pelvic cavity and bones (which is consistent with other reports [3, 6, 7]). In our series, there seems to be a greater likelihood of developing disseminated cancer when CC is locally advanced (an observation akin to that of other investigators [4, 8, 9]).

With respect to prognosis, our findings support previous studies describing a low expectation of long-term survival in women with CC stage IV-B or metachronously appearing systemic disease [2, 4, 6, 10]. Therefore, the treatment of EPM from CC, whether synchronous or metachronous in nature, may be considered palliative. In this regard, we concur with the management philosophies that 1) stage IV-B CC patients with small volume disease and good performance status should be considered for treatment to a radical dose even though the intent may be palliative, and 2) individuals with very extensive tumor

and poor performance status ought to be treated less vigorously [11]. Reported longer median survival and a survival probability of 25% at three years [11, 12] help sustain the preceding first consideration.

In this limited experience, the known efficacy of RT in effecting freedom from pain [2, 4, 6, 9] or respiratory symptoms, recovery from motion disturbances, and production of objective tumor responses was reaffirmed.

Although exceptions occur, the prospect for long-term survival is generally limited in patients with EPM of CC. The accepted major indication for treatment is improvement in the quality of life.

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Address reprint requests to:

F. L. AMPIL, M.D.,
Division of Radiation Oncology,
Louisiana State University Health Sciences Center,
1501 Kings Highway, Shreveport,
Louisiana 71130 (USA)