
GYNAECOLOGY

Treatment of the Uterine Cervical Cancer

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ABSTRACT

Objective To assess outcome of treatment of cervical cancer stage IIb by various modalities.

Design Retrospective descriptive study.

Setting Division of Gynaecologic Oncology, Department of Surgery, National Cancer Institute, Department of Medical Services, Ministry of Public Health.

Subjects Three hundred and eighty-five patients of stage IIb in total 1,026 cases of carcinoma of the uterine cervix with various stages treated at National Cancer Institute from 1977-1980.

Main outcome measures Mean survival time, 5-year survival rate.

Results One thousand and twenty-six cases of carcinoma of the uterine cervix with various stages treated at National Cancer Institute from 1977-1980 were reviewed. There were 248 (24.2%) stage 0, 73 (7.1%) stage Ia, 27 (2.6%) stage Ib, 385 (37.6%) stage IIb, 217 (21.2%) stage III and 76 (7.4%) stage IV. The majority of the cell types were squamous cell which constituted of 868 cases (84.6%). The other cell types were 95 (9.3%) of adenocarcinoma, 32 (3.1%) of adenosquamous and 31 (3.0%) of undifferentiated cell type. The mean age of patients by stages were 39.96, 41.34, 46.63, 46.70, 51.16 and 48.71 years for stage 0, Ia, Ib, IIb, III and IV respectively. The modes of treatment were either single or combination of surgery, radiation therapy and chemotherapy according to the stage of the disease. The results of various methods of treatment and status at last contact were analyzed and found 296 (28.8%) deaths, 569 (86.5%) cases were alive with no evidence of disease while 89 (13.5%) cases were alive with residual lesions. The remainder 72 cases (7%) were lost to follow up. Since the high prevalence of stage II cervical carcinoma, this analysis was emphasized

Table 3. Modality of treatment of cervical cancer

Variables	n	%
Single Treatment		
conization	24	2.9
total hysterectomy	249	30.9
radical hysterectomy	29	3.7
external radiation	20	2.5
internal radiation	8	0.9
combined radiation	474	58.7
chemotherapy	3	0.4
Combination Treatment		
radiation + surgery	69	31.5
surgery + radiation	48	21.9
radiation + chemotherapy	88	40.2
chemotherapy + radiation	1	0.4
surg. + radia. + chemo.	5	2.2
radia. + chemo. + surg.	1	0.4
radia. + surg. + chemo.	7	3.4

Table 4. General characteristics of Stage II cervical cancer (n = 385)

Variables	n	%
Age :		
35 and less	39	10.1
36-45	151	39.2
46 and over	195	50.7
Cell type :		
Adenosquamous cell	18	4.7
Squamous cell	296	76.9
Adenocarcinoma cell	53	13.7
Undifferentiated cell	18	4.7

Table 5. 5-year survival for cervical cancer stage II by all types of treatment at NCI (n = 369) (16 cases lost follow up)

Modes of treatment	n	%
Radiation alone	170/262	64.9
Radiation + Surgery or Surgery + Radiation	62/74	83.8
Radiation + Chemotherapy	11/33	33.3
Total	243/369	65.9

Table 6. Comparison of alive patients after treatment between Radiation and Radiation + Surgery

Months	Radiation n (%)	Radiation + Surgery n (%)
0	262 (100)	74 (100)
6	262 (100)	71 (96)
12	236 (90)	70 (94.6)
18	210 (80)	70 (94.0)
24	196 (75)	67 (90.5)
36	185 (71)	66 (89.2)
48	180 (69)	63 (85.1)
60	170 (65)	62 (83.8)
72	152 (58)	59 (79.7)
84	131 (50)	48 (64.8)

Total number of cases in Stage II = 385

Less than 60 months lost follow up cases = 16

Radiation + Chemotherapy cases = 33

Total cases = 336

(P < 0.05)

Results

The majority of the patients from this study were stage II (37.6%), stage 0 (24.2%), and stage III (21.2%) (Table 1). The majority of cell types were squamous cell which constituted of 868

cases (84.6%). The mean age of patients by stage were 39.96, 41.34, 46.43, 46.7, 51.16 and 48.17 years for stage 0, Ia, Ib, II, III and IV respectively (Table 2). Table 3 demonstrates the modality of treatment of cervical cancer. The

treatments which all patients received and status of last contact revealed 296 deaths (28.8%), 658 alive cases (64.1%) of which 569 (86.5%) cases without disease and 89 (13.5%) cases with residual tumour. The remainder 72 cases (7.0%) were lost to follow up.

The patients with stage 0, Ia and Ib had very low death rate and lived longer than 5 years.

The overall median survival time for the patients with stage II was 83.7 months. Squamous cell carcinoma had the highest survival rate while the undifferentiated carcinoma had the lowest. Among the various schemes of treatment, radiotherapy followed by surgery revealed the best survival prospects with highest median survival time of 79.12 months comparing to those received radiation therapy alone or combination of radiation and chemotherapy.

The patients with stage III cervical carcinoma had 31.4 months for overall median survival time. The young age group (36 years) had the lowest response rate with the overall median survival time of 12.4 months. The undifferentiated cell carcinoma, adenocarcinoma and mixed cell type stage III had the median survival time of 28.8, 15.4 and 5.3 months respectively while the squamous cell type had increased to 38.6 months.

The patients with stage IV cervical cancer had overall median survival time of 16.8 months with no significant difference among the cell types. Since the majority of cases were in stage II, this analysis was emphasized particularly to this stage in terms of survival rate related to methods of treatment. The general characteristics of 385 stage II cervical cancer patients were analyzed (Table 4). The findings were as follows : the most common age group was 46 years and over, 195 cases (50.65%), the majority of cell types were squamous cell which comprised of

296 cases (77.1%). The treatment modalities were single and combination methods (Table 5) including number of lost follow up patients the first 3 years according to the following protocol.

- Radiation alone : cases decided by tumour conferences
- : refused surgery cases
- Radiation + Surgery : barrel shaped, big primary tumour (more than 4 cm.)
- : non squamous cell type
- Surgery + Radiation : surgical staging cases with positive nodes, residual tumour or inadequate surgery
- Radiation + Chemotherapy : post radiation cases with residual tumour
- : recurrent cases
- : in-operable cases

The 5-year survival for cervical cancer stage II patients (369 cases) treated at NCI related to modalities of treatment (Table 5) revealed that radiation therapy followed by surgery yielded the better outcome (84%) than other modalities. The comparison of survival patients treated by radiation alone and radiation therapy followed by surgery for 84 months period showed the latter had better result (64.8%) than radiation therapy alone (50%) ($P < 0.05$) (Table 6). Even though this was not a randomized study, the 5 year survival result still agrees with data from Oxford Series,⁽³⁾ that preoperative radiation followed by surgery yields 77% 5-year survival and M.D. Anderson, 83.5% for stage IIa, and 66.5% for stage IIb. Neo-adjuvant chemotherapy or induction chemotherapy is a primary chemotherapy prior to radiotherapy or surgery. After the study of Cheansin⁽⁴⁾ on chemotherapy for cancer

of the uterine cervix, the National Cancer Institute has started using Neo-adjuvant chemotherapy trial on cancer of the cervix in stage I b, II and III since 1985. The outcome will be reported in the near future.

Discussion

The findings of 1,026 cervical cancer patients with various stages treated at National Cancer Institute from 1977-1980 were as follows. The largest group were the patients with stage 0, IIb and III. Most of the patients died at 8-9 years after diagnosis. The patients with stage 0, Ia, Ib treated with surgery or surgery followed by radiation therapy for stage Ia and Ib with positive pelvic nodes, had better prognosis and cure rate. For 385 stage II cervical cancer patients, the median survival time was 83.7 months, and 77.7% of stage II patients had squamous cell type. Radiation therapy followed by surgery had better outcome than radiation alone ($P < 0.05$). However, the new protocol studied by neoadjuvant chemotherapy followed by radiation therapy or surgery which are on study may yield better prognosis and result. Two hundred and seventeen stage III patients with the mean age of 51.16 years treated by radiation therapy had median survival time of 31.43 months. The patients with age group less than 35 years had only 12.37 months' survival time. For 76 cases of stage IV patients, the mean age was

48.7 years and overall median survival time was 16.8 months.

We believe that the best treatment for stage II cervical cancer is the combination of radiation therapy and surgery. With the limitation of this study, the treatment efficiency for middle age women who are the caring mothers and the best human resource of the country, the following topics are very interesting for further studies : - clinical trial for randomized treatment comparison in every stages, - the best treatment for various age group and histological cell types, - neo-adjuvant chemotherapy may be the future treatment.

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