

Survival in endometrial cancer

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Abstract

Objective; To identified survival of endometrial cancer patients in National Cancer Institute of Thailand.

Material and Method ; This is a retrospective descriptive study. All patients with endometrial cancer who received treatment in National Cancer Institute From 1987-2004 were included.

Results ; Five hundred and seventy nine patients with endometrial cancer that met the study criteria were included. The median age of the patients were 54.13 years. The median overall survival was 93.75 months. The 5 year survival of endometrial cancer patients were 84.1% in stage I, 63.6 % in stage II,

53.5% in stage III, and 13.6% in stage IV. In patient, were received radiotherapy, had overall survival about 70.1% at 5 years. In cases of intermediated to high risk of recurrence endometrial cancer had no statistically significant in difference of overall survival between radiation and non-radiation group.

Conclusion ; The survival in endometrial cancer patients were good and radiation in intermediate to high risk of recurrence was not increase overall survival.

Keywords : survival, endometrial cancer, radiotherapy

Introduction

The endometrial cancer is estimated to be 10% of female cancer (1, 2) and 60% of these occur in more developed contries. In Thailand over the period 1998-2000, it was the tenth common cancer for women, the estimated number of new cases was reported to be about 2.2 % of all female cancers (3). Endometrial cancer is most in early stage for stage I found about 70% of newly diagnosis cases

and stage II about 10% of cases. (4) In standard management of endometrial cancer are surgical staging is initially accepted in cases which have co-morbidity or unsuitable for surgery and adjuvant treatment were composed radiotherapy, chemotherapy, hormonal therapy and immunotherapy. In cases, which received adjuvant treatment, classified by stage and risk of recurrence. Survival in endometrial cancer are reported about 84% (5) in early stage

and 30-70%(6) in advance stage at 5 year survival. In interesting condition of early stage endometrial cancer, which have intermediated to high risk for recurrence such as FIGO stage IBG2-3, IC and grade, IIA-B, had receive radiotherapy is better local control of disease but not prolong overall survival. (7-13)

Therefore, the authors assessed survival of endometrial cancer patients were received treatment in National Cancer Institute, Thailand.

Materials and Methods

This is a retrospective descriptive study. All patients with endometrial cancer received treatment in National Cancer Institute From 1987- 2004 were included. This study was approved by the Ethics Committee of National Cancer Institute.

The patients' clinical and pathological data were collected from the medical records which included radiotherapeutic charts and follow-up information. As of May 31, 2004, 612 patients with histology confirmed endometrial cancer were identified. The staging of endometrial cancer according by International Federation of Obstetrics and Gynecology(FIGO) staging system.(6) The patients data such as age, stage, histological types (from record in office histological report), grade of tumor, radiotherapeutic doses, cycle, and brachytherapy technique and duration of radiotherapy were collected. The date of first diagnosis of endometrial cancer, the date of each course of radiotherapy, the date of recurrence, the date of last visit and the date of death were all recorded. The main outcome was overall survival.

Follow up examination took place at Gynecological Oncology Unit and Radiation Therapy Unit. Patients were scheduled for follow up every 2 months in the first year, every 3 months during the second year and every 6 months thereafter. Follow up data, such as date of last visit and disease status at the time of the last contact were noted. All patients were followed until date of death or lost to follow up. The overall survival was defined from the date of primary laparotomy or date of diagnosis in case of in-operable to the date of death or the date of last follow up. (7)

The statistical analysis was done using Statistical Package for the Social Sciences (SPSS) and the descriptive statistics were used for demographic data and summarized as mean, median and standard deviation for overall survival, variation between patients use ANOVA method. Survival curves were estimated by the Kaplan-Meier method and compared using the log-rank test in univariate analysis. A p-value of less than 0.05 was considered statistically significant.

Results

From January 1987 to May 2004, a total of 612 cases of endometrial cancer were registered in gynecological oncology unit was found 4 percent of female cancer and about 9.3 percent of gynecological cancer in National Cancer Institute. The number of endometrial cancer patients were met the inclusion criteria, were 579 cases and become to data analysis. The patients' characteristics are shown in Table 1. The mean age of patients was 54 years with the range of 27 to 72 years. The occupation of endometrial patients was most in housewife. The

marital status more married than single status. The most menopausal status of endometrial cancer was postmenopausal status about 70.2%. Eighty three percent of case were receive surgical staging by hysterectomy and seventeen percent were not take hysterectomy because of advance stage and unsuitable for surgery.

Stage and cell types were shown in Table 1. Most of the patients were in stage I-II were 80.7% and stage III-IV were 19.3%. Most common histological cell types were adenocarcinoma 93.1% and most grade of carcinoma were well differentiated about 54 %.

The most of adjuvant therapy was radiotherapy about 68%. The radiotherapy in endometrial cancer was comprised whole pelvic irradiation and vaginal brachytherapy. External beam irradiation used Linear Accelerator 6 mega voltages (MV). The doses of whole pelvic irradiation was 40 Gy (36-55 Gy) with antero-posterior parallel-opposed (AP//PA technique) fields and daily fractions of 1.8 to 2.0 Gy. The Caesium-137 low dose rate vaginal brachytherapy was applied 20 Gy (1.8 – 30 Gy) at point 0.5 centimeters from submucosa of upper part of the vagina by vaginal colpostats in 1-2 fractions. The mean duration of radiotherapy was about 40 days (within 6 weeks). The recurrence was found about 15.4% of endometrial cancer and disease related death about 18%.

The survival analysis, was performed in five hundred and seventy-nine patients, was shown in figure 1. The median overall survival of endometrial cancer was 93.75 month, range 0.9-138.97 months. The 5-year overall survival depend on stage were 84.1% in stage I, 63.6 % in stage II, 53.5% in stage

Table 1. Base line characteristics of patients (total N=579 patients)

Characteristics	Number of patients	Percent
Age (years)	Mean 54.13	Range 27-72
Occupation		
Farmer	94	16.4
Sale	134	23.3
Housewife	155	26.7
Government	70	12.0
Employee	126	21.6
Marital status	109	18.8
Single	332	57.3
Married	138	23.9
Divorce		
Parity		
<2	217	37.4
2-5	327	56.5
>5	35	6.1
Underlying disease		
No	462	79.8
Underlying disease	117	20.2
Menopausal status		
Premenopause	173	29.8
Postmenopause	406	70.2
Surgery		
Hysterectomy	480	82.9
Non - hysterectomy	99	17.1
Stage		
I-II	467	80.7
III-IV	112	19.3
Grade		
Well differentiated	314	54.3
Moderate differentiated	116	20.0
Poorly differentiated	149	25.7
Cell type		
Adenocarcinoma	539	93.1
Clear cell carcinoma	5	0.9
Mixed tumor	10	1.7
Other	25	4.3
Adjuvant treatment		
Expectant	149	25.7
Radiotherapy	391	67.5
Hormonal treatment	6	1.0
Chemotherapy	33	5.8
Recurrence		
No	490	84.6
Yes	89	15.4
Course of Death		
Disease related	104	17.9
Non – disease related	79	13.7
Alive	396	68.4

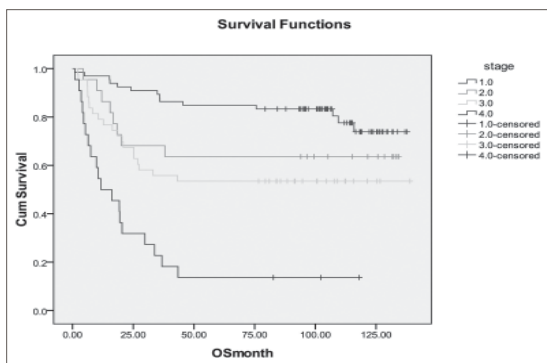


Figure 1 Overall survival in endometrial cancer by stage

III, and 13.6% in stage IV. The overall survival of patients, when analyzed by subgroups in radiotherapy group, was 70.1% at 5 years. (Figure 2)

In intermediated to high risk of recurrence of early stage endometrial cancer was comprised FIGO stage IB to IIB. The median overall survival in this group was 92.39 month, range 0.93 to 137.77 months. The 5 years overall survival in intermediated to high risk of recurrence was 84.6% in observation group and 75.8% in adjuvant radiotherapy group. The comparison of overall survival in intermediated to high risk of recurrence was found have statistically significant, p-value about 0.314. (Figure 3)

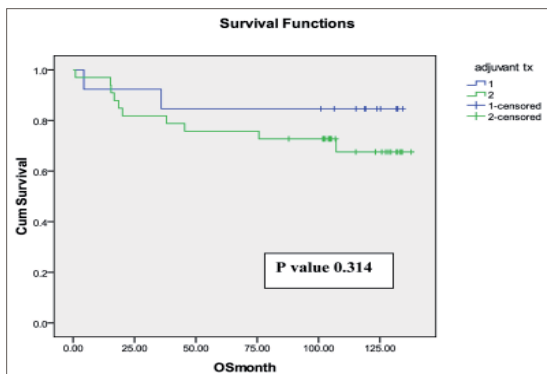


Figure 3 Overall survival in intermediated to high risk of recurrence of early stage endometrial cancer between radiotherapy and non-radiotherapy groups.

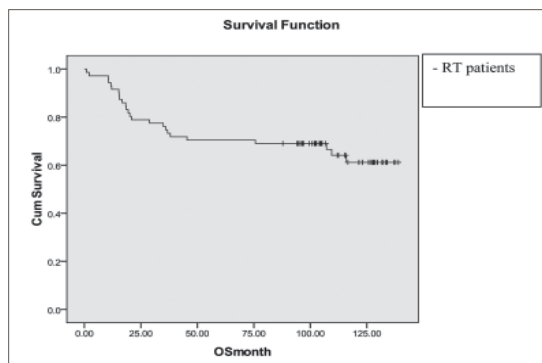


Figure 2 Overall survival in RT patients (n=391 patients)

Discussion

In the present study show endometrial cancer patients which had treatment in National Cancer Institute of experience for seventeen years. The mean age of patients was about 54 year which most in postmenopausal woman. Major of them were in early stage about 80% which same from previous study (4,14) and this finding will have good prognosis when compared with other gynecologic malignancy(15). The major cell type was adenocarcinoma about 93% and well differentiated type was about 54.3% which represented favorable outcome(15). In treatment of endometrial cancer initially by surgical staging excepted in-operable cases such as major medical disease or more advance disease. This presented study was show the patients who underwent surgery about 82.9%. In cases which not have surgery about 17.1% because of major medical diseases not appropriate to surgery and advance locally disease which can not hysterectomy. This group of the patients was treated by primary radiotherapy or palliative treatment (palliative hormonal therapy and chemotherapy).

The radiotherapy in endometrial cancer in this present study showed variation in treatment

technique and dose. The most of treatment fields used AP//PA technique in whole pelvic irradiation and about two percent used four field box technique. The most of brachytherapy used Caesium-137 and about ten percent used Ir-192 HDR. The variation of treatment in radiotherapy was depended by radiologist and variation of guideline because of long duration of data review about 17 years.

The overall survival in this study were 84.1% in stage I, 63.6 % in stage II, 53.5% in stage III, and 13.6% in stage IV at 5 years, which associated in previous study.(14) In intermediated to high risk of recurrence of early stage endometrial cancer which is stage IB-IC, and stage II, had overall survival equally from previous study. (7-10) The comparison of overall survival in intermediated to high risk of recurrence was found better in radiotherapy patients but not have statistically significant. This

conclusion of role of radiation therapy in intermediated to high risk early stage endometrial cancer is limited in overall survival.(16) In this presented study found recurrence rate about 15.4% and cancer related death was 17.9% which same with previous study().

Conclusion

The survival in endometrial cancer patients were good and radiation in intermediate to high risk of recurrence not prolong overall survival.

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