Radiation, Chemotherapy or Combined Modality Therapy in Adjuvant Treatment for Stage III Endometrial Carcinoma in Lower Southern Thailand: Disease Recurrence and Overall Survival

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Objective: *To survey disease-free survival (DFS) and overall survival (OS) of patients with stage III endometrial carcinoma treated with post-operative radiation and/or chemotherapy*
Material and Method: *The medical records of patients with surgical stage III endometrial carcinoma, and receiving adjuvant treatment between January 2003 and December 2012 were reviewed. DFS and OS were analyzed using the Kaplan-Meier method and Cox proportional hazards model.*
Results: *Of the 54 eligible patients, 61% underwent radiation, 19% chemotherapy, and 20% chemotherapy with radiation. The median DFS was 36.7 months. The 3-year DFS and OS was 51.9% (95% CI 36.3-74.1%) and 70.6% (95% CI 57.4-86.8%), respectively. There was no significant difference in DFS and OS among treatment groups. Cox regression analysis showed grade 2-3 tumors and menopause were associated with poor DFS and OS.*
Conclusion: *The DFS and OS in stage III endometrial carcinoma receiving postoperative adjuvant therapy were quite good and were not different among radiation therapy, chemotherapy, and combined treatment groups. The multi-center randomized prospective study was needed to determine the standard modality.*

Keywords: *Endometrial carcinoma, Adjuvant therapy, Radiation, Chemotherapy*

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Endometrial carcinoma is the most common gynecologic malignancy in United States with 43,470 new cases and 7,950 deaths reported in 2010[1]. In Thailand, endometrial carcinoma is the third gynecologic malignancy. The incidence is 2.8/100,000 per year[2], a trend that it will increase in the future.

About 88% of the patients were diagnosed at early stage (stage I-II) with a 5-year overall survival rate of 66 to 86%[3]. About 16% were diagnosed at advanced stage (stage III-IV)[4]. The 5-year overall survival (OS) rate is 30 to 89%[5-7] and 0 to 10%[8] in stage III and stage IV, respectively.

The treatment of advanced stage endometrial carcinoma is hysterectomy with bilateral oophorectomy with/without pelvic and paraaortic lymphadenectomy followed by adjuvant treatment. Formerly, radiation (RT) was the standard adjuvant treatment in advanced endometrial carcinoma. Smith et al[5] reported that whole abdominal radiation was effective and well tolerated. However, RT alone has not improved overall survival (OS) due to high rate of distant failure[9]. During the past decade, chemotherapy (CMT) has been used increasingly in combination with RT. It is reasonable that combined modality therapy of CMT and RT will result in superior clinical outcomes compared to either modality alone by controlling both distant and local disease. However, there are limited randomized studies supporting this postulation. The Gynecologic Oncology Group (GOG) 122 by Randall et al[6], reported that chemotherapy (cisplatin with adriamycin) significantly improved progression-free survival (PFS) and OS compared to whole abdominal irradiation in stage III-IV endometrial carcinoma. Maggi et al[10], reported no statistical difference in OS of high-risk patients (stage ICG3, IIG3 with myometrial invasion >50%, and III) were treated with CMT (cisplatin, adriamycin and cyclophosphamide) compared to RT. Susumu et al[11] also reported that no

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significant difference in OS in patients stage IC-IIIC whom were treated with chemotherapy (cisplatin, adriamycin and cyclophosphamide) compared to RT. Such studies have not yet determined the optimal adjuvant treatment in subgroups of the advanced diseases. In a large retrospective trial of adjuvant treatment in advanced endometrial cancer, it concluded that combined adjuvant CMT and RT were associated with improved survival rates in patients with advanced stages of the diseases, compared to either modality alone[12].

Due to insufficient data suggesting the optimal adjuvant therapy in advanced endometrial cancer, the authors aim to study the effect of postoperative adjuvant treatment on OS and disease-free survival (DFS), and to evaluate prognostic factors in patients with stage III endometrial carcinoma.

Material and Method

A retrospective analysis of advanced endometrial carcinoma diagnosed between January 2003 and December 2012 was conducted in Songklanagarind Hospital. Inclusion criteria included patients with surgically stage III endometrial cancer and had received radiation and/or chemotherapy. Patients with a gross residual tumor, incompleted treatment, and lost to follow-up were excluded. All patients received hysterectomy and bilateral salpingo-oophorectomy. In our institution, omentectomy is included in surgical staging for patients with G3 endometrioid and non-endometrioid histology. Selective pelvic and paraaortic lymphadenectomy is optional. In the past, RT was used for adjuvant treatment for stage III endometrial carcinoma in our institution. For the last five years, CMT was usually added. Surveillance practice at our institution was to follow-up patients after complete therapy, every three months for two years, every six months for the next three years, and then annually. If recurrence was detected, patients with an isolated vaginal recurrence and had not received adjuvant RT, RT was given. For patients who had been previously treated with RT, treatment modalities included medication, local resection, or RT. For patients who were not candidates for local therapy, treatment was CMT or hormones. Clinical data were obtained from operative notes, both inpatient and outpatient charts. Original pathology reports were reviewed for histologic type, International Federation of Gynecology and Obstetrics (FIGO) stage 2009, tumor grade, status of retroperitoneal lymph nodes, myometrial invasion, lymphovascular space invasion, and cervical involvement. Demographic information as well as date of surgery, stage of disease, type of adjuvant therapy, date and site of recurrence or progression, disease status, and date of last follow-up or death were abstracted from inpatient charts. Complication of treatment were recorded as hematologic complication (anemia was hemoglobin <10g/dl or hematocrit <30%, thrombocytopenia was platelet count <100,000/μL, neutropenia was white blood cell <3000/μL or absolute neutrophil count <1500/μL and febrile neutropenia was fever >38.3 degree Celsius with absolute neutrophil count <500/μL), gastrointestinal complication (radiation proctitis, nausea, vomiting, diarrhea and rectovaginal fistula), renal insufficiency (creatinine clearance <50 mL/min) and cancer related fatigue. Statistical analyses were performed using SPSS Version 17. Chi-square and Fisher's exact test were used to identify differences between groups for categorical variables. The overall survival defined as the time from complete therapy to death from disease and disease-free survival defined as the time from complete therapy to disease recurrence, progression or death from any cause. For the survival analysis, patients who did not progress or die were counted at the date of their last follow-up. The Kaplan-Meier method was used to generate survival curves and calculate 3-year OS and DFS. Univariate analysis and Cox regression model was performed to determine prognostic factors. The p-value less than 0.05 was considered statistically significant. The present study was approved by Ethics Committee of Faculty of Medicine, Prince of Songkla University.

Results

Of the 93 patients with stage III endometrial carcinoma whom were diagnosed between January 2003 and December 2012, thirty-one patients were excluded (primary RT 19, primary RT with surgery 6, hormonal therapy 1, CMT 1, concurrent chemoradiation with surgery 1, neoadjuvant CMT with surgery and RT 1, concurrent cervical carcinoma 1, and loss follow-up 1). The remaining 62 patients underwent surgical staging as primary treatment with no gross residual disease. Of these, eight patients were excluded, six due to incomplete adjuvant treatment, and two because of adjuvant hormonal therapy. Finally, 54 patients were included in the present study.

Patients' age, religion, age of menarche, and menopausal status, were not different among groups (Table 1). Pelvic lymphadenectomy and paraaortic lymphadenectomy were performed in 45 (83%) and

40 (74%) patients. For stage IIIA, 55% underwent pelvic node dissection and 61% paraaortic node dissection. Six patients who were stage IIIC1 did not received paraaortic lymphadenectomy and one stage IIIC2 patient received only paraaortic lymphadenectomy. The histological characteristics are included in Table 1.

Adjuvant therapy was administered as followed: 33/54 (61%) received RT, 10/54 (19%) received CMT, and 11/54 (20%) received CMT with RT.

In the RT group (n = 33), twenty-seven patients (82%) were given whole pelvic radiation (WPRT) with vaginal brachytherapy (VBT), five patients (15%) received WPRT plus extended field with VBT (1/11, 9% of stage IIIC1 and 4/7, 57% of stage IIIC2). One patient in stage IIIA was treated by WPRT.

In the CMT group (n = 10), all patients were treated with platinum-based chemotherapy completing 6 cycles (cisplatin with adriamycin 5, carboplatin with paclitaxel 3, and cisplatin with cyclophosphamide 2).

In combination CMT with RT group (n = 11), six patients (55%) were treated with CMT followed by RT, two patients (18%) received RT followed by CMT, and one patient received a sandwich technique (CMT 3 cycles followed by RT then CMT 3 cycles).

Table 1. General and histological characteristic of patients

Characteristic	All (n = 54)	RT (n = 33)	CMT (n = 10)	CMT+RT (n = 11)	p-value
Age (years)					
Mean ± SD	56.5±10.4	57.2±10.4	54.3±9.5	56.1±12.0	0.934
Religion					
Buddhist	49 (91%)	29 (88%)	10 (100%)	10 (91%)	0.796
Islamic	4 (7%)	3 (9%)	-	1 (9%)	
Christian	1 (2%)	1 (3%)	-	-	
Age of menarche (years)					
Mean ± SD	14.4±2.2	14.1±2.1	15.3±2.4	14.4±2.1	0.409
Menopausal status					
Yes	33 (61%)	21 (64%)	4 (40%)	8 (73%)	0.274
Age of menopause (years)					
Mean ± SD	50.4±4.5	50.9±5.3	50.2±0.5	49.3±3.3	0.733
Histology					
Endometriod	46 (85%)	31 (94%)	7 (70%)	8 (73%)	0.028*
Non endometrioid	5 (9%)	1 (3%)	3 (30%)	1 (9%)	
Mixed	3 (6%)	1 (3%)	-	2 (18%)	
Grade					
Grade 1	16 (30%)	11 (33%)	2 (20%)	3 (27%)	0.455
Grade 2-3	33 (61%)	21 (64%)	6 (60%)	6 (55%)	
FIGO staging					
Stage IIIA	18 (33%)	15 (46%)	2 (20%)	1 (9%)	0.187
Stage IIIC1	23 (43%)	11 (33%)	5 (50%)	7 (64%)	
Stage IIIC2	13 (24%)	7 (21%)	3 (30%)	3 (27%)	
Positive peritoneal washing	6 (11%)	5 (15%)	1 (10%)	-	0.601
Positive pelvic node	35 (65%)	18 (55%)	8 (80%)	9 (81%)	0.096
Positive paraaortic node	13 (24%)	7 (21%)	3 (30%)	3 (27%)	0.910
Myometrial invasion					
No or ≤50%	21 (39%)	11 (33%)	4 (40%)	6 (55%)	0.498
>50%	32 (59%)	21 (64%)	6 (60%)	5 (45%)	
Cervical involvement	18 (33%)	11 (33%)	4 (40%)	3 (27%)	0.819
Positive LVSI	25 (46%)	15 (46%)	4 (40%)	6 (55%)	0.725

* Statistical significant

RT = radiation; CMT = chemotherapy; LVSI = lymphovascular space invasion

Two patients who had squamous cells and adenosquamous subtype were treated with concurrent chemoradiation. All patients that received platinum-based chemotherapy were as follows, cisplatin with adriamycin 7, carboplatin with paclitaxel 2, cisplatin with adriamycin then change cisplatin to carboplatin 1 and cisplatin with 5-fluorouracil 1 (squamous cell subtype). The RT technique is follows, WPRT with VBT 8, WPRT plus extended field with VBT 2, and WPRT plus extended field 1.

Following the median follow-up at 19.9 months (range, 0.2-97.9), 33/54 (61%) patients alive without disease, 6/54 (11%) patients alive with disease, 14/54 (26%) patients died and one patient in radiation group died from other cause (cirrhosis with hepatic encephalopathy). Eighteen patients (33%) were identified as having disease recurrence; in RT group 11/33 (33%), in CMT group 4/10 (40%) and in CMT with RT group 3/11 (27%).

Mostly patients who received chemotherapy (all patients in CMT group and 72.7% in CMT with RT group) had at least one of hematological complication that was significant higher compared to RT group. Anemia was the most common hematological complication. Three patients in the CMT with RT group had febrile neutropenia and need hospitalization for 6-8 days. Gastrointestinal complication was significant higher in patients who received radiation (all patient in CMT with RT group and 60.6% in RT group) compared with CMT group. In CMT with RT group was significant higher rate of radiation proctitis compared with RT group. There were two patients in RT group had rectovaginal fistula that needed permanent colostomy. Renal insufficiency was found 11.1% in patients who received chemotherapy (20% in CMT group and 36.4% in CMT with RT group). The complication of treatment was showed in Table 2.

The most common pattern of recurrence (67%) was distant metastasis (9/33, 27% in RT group; 1/10, 10% in CMT group, and 2/11, 18% in CMT with RT group). The local recurrence was found in 11% (0/33 in RT group; 1/10, 10% in CMT group, and 1/11, 9% in CMT with RT group). Mixed pattern was 22% (2/33, 6% in RT group; 2/10, 20% in CMT group, and 0/11 in CMT with RT group). The common organs of recurrence were intra-abdomen 50%, lungs 33%, supraclavicular lymph node 33%, and vagina 28%. There was no statistical difference among three groups (Table 3).

Table 2. Complication stratified by type of adjuvant therapy

Complication	All (n = 54)	RT (n = 33)	CMT (n = 10)	CMT+RT (n = 11)	p-value
Hematology	29 (53.7%)	11 (33.3%)	10 (100%)	8 (72.7%)	<0.001*
Anemia	22 (40.7%)	5 (15.2%)	9 (90%)	8 (72.7%)	<0.001*
Thrombocytopenia	3 (5.6%)	-	2 (20%)	1 (9.1%)	0.046
Neutropenia	14 (25.9%)	6 (18.2%)	4 (40%)	4 (36.4%)	0.261
Febrile neutropenia	3 (5.6%)	-	-	3 (27.3%)	0.002*
Gastrointestinal system	35 (64.8%)	20 (60.6%)	4 (40%)	11 (100%)	0.012*
Radiation proctitis	14 (25.9%)	7 (21.2%)	-	7 (63.7%)	0.002*
Nausea/vomiting	12 (22.2%)	5 (15.2%)	3 (30%)	4 (30.4%)	0.276
Diarrhea	16 (29.6%)	12 (36.4%)	1 (10%)	3 (27.3%)	0.273
Rectovaginal fistula	2 (3.7%)	2 (6.1%)	-	-	0.516
Renal insufficiency	6 (11.1%)	-	2 (20%)	4 (36.4%)	0.002*
Fatigue	11 (20.4%)	4 (12.1%)	3 (30%)	4 (36.4%)	0.158

* Statistical significant
RT = radiation; CMT = chemotherapy

Table 3. Recurrence site stratified by type of adjuvant therapy

Recurrence site	All (n = 18)	RT (n = 11)	CMT (n = 4)	CMT+RT (n = 3)	p-value
Pelvis	2 (11%)	-	1 (25%)	1 (33%)	0.146
Distant	12 (67%)	9 (82%)	1 (25%)	2 (67%)	
Mixed	4 (22%)	2 (18%)	2 (50%)	-	

RT = radiation; CMT = chemotherapy

The overall median DFS in all patients was 38.7 months. The overall 3-year DFS was 51.9% (95% CI; 36.3-74.1). There was no significant difference of DFS among adjuvant therapy groups as follows, radiation group 52.5% (95% CI; 33.9-81.3), chemotherapy group 57.1% (95% CI; 28.9-100.0), and combination chemotherapy with radiation group 38.9% (95% CI; 9.3-100.0), p-value = 0.74 (Fig. 1).

The overall median OS was not reached. The overall 3-year OS was 70.6% (95% CI; 57.4-86.8). OS of radiation group was 71.6% (95% CI; 56.5-91.0), chemotherapy group 60.0% (95% CI; 29.3-100.0), and combination chemotherapy with radiation group 75.0% (95% CI; 49.6-100.0). There was no significant difference of OS among groups, p-value = 0.98 (Fig. 2).

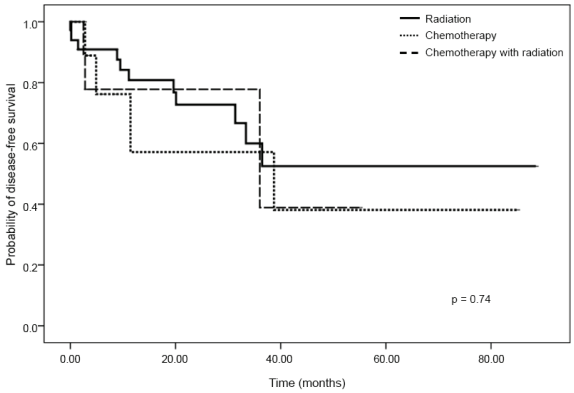

Fig. 1 Kaplan-Meier disease-free survival analysis for women with stage III endometrial carcinoma by treatment group.

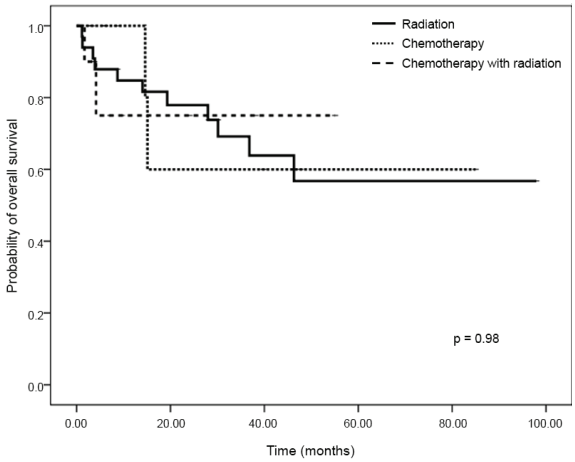

Fig. 2 Kaplan-Meier overall survival analysis for women with stage III endometrial carcinoma by treatment group.

Univariate analysis showed only tumor grading was associated with DFS (HR 5.57, 95% CI; 1.25-24.8, p-value = 0.02) and OS (HR 7.43, 95% CI; 0.96-57.75, p-value = 0.012), while age (HR 2.98 95% CI; 1.00-8.88, p-value = 0.049) and menopause status (HR 3.51 95% CI; 0.96-12.9, p-value = 0.038) was associated with OS (Table 4). Cox regression analysis showed grade 2-3 tumor and menopause status were independent factors associated with a poorer DFS and OS (Table 5).

Discussion

The DFS and OS in stage III endometrial carcinoma patients who received adjuvant therapy were quite good (3 year OS 60-75%). The present study suggest that no significant difference in the 3-year DFS and OS among adjuvant groups. In contrast, the benefit of CMT with RT was found in two retrospective studies. The largest retrospective study reported by Secord et al[12], included 356 patients with stage III and IV endometrial carcinoma. It was found that combined multi-modality therapy, significantly improved OS and PFS in patients with advanced stage disease compared to either modality alone (p-value <0.001). The 3-year PFS and OS of patients receiving chemotherapy was 19% and 33%, radiation 59% and 70% and combined modality 62% and 79%. Marchetti et al[13] analyzed 82 patients with stage III of endometrial carcinoma of any histology undergoing primary surgical treatment and reported that a combined adjuvant approach with CMT and RT may be effective in reducing the recurrent rate. The 3-year relapse-free survival was 86.5, 65.8, and 44.1%, with a multimodality approach, CMT and RT, respectively.

Some phase II studies showed the benefit of CMT with RT in advanced endometrial cancer. Bruzzone et al[14] reported nine years PFS and OS in 45 patients with stage III and IV endometrial carcinoma receiving postoperative CMT (cisplatin, epirubicin and cyclophosphamide with RT was 30% and 53%, respectively. Lupe et al[15] reported that 33 patients with advanced endometrial carcinoma who received CMT (paclitaxel and carboplatin) four cycles followed by RT then with chemotherapy of two cycles, had two years DFS and OS of 55%.

There are two phase III randomized prospective trials comparing combined CMT with RT to RT alone. Hogberg et al[16,17] reported on 378 patients with high-risk endometrial cancer (stage I-IIIC, grade 3, deep myometrial invasion, DNA non-diploidy, serous, clear-cell, or anaplastic histology).

The sequential addition of CMT to RT was associated with a significant reduction in the risk of relapse or death (HR 0.64, 95% CI; 0.41-0.99; p-value = 0.04), but no significant difference was identified in the OS. However, there was only 1.6% of the study group that was affected by stage III endometrial cancer. The last

Table 4. Univariate analysis of disease-free survival and overall survival

Factors	Disease-free survival (n = 54)		Overall survival (n = 54)	
	Crude HR (95% CI)	p-value	Crude HR (95% CI)	p-value
Age				
≥60 vs. <60	1.55 (0.59, 4.07)	0.38	2.98 (1.00, 8.88)	0.049*
Adjuvant treatment				
CMT vs. RT	1.43 (0.45, 4.53)	0.74	0.92 (0.20, 4.23)	0.97
CMT+RT vs. RT	1.51 (0.41, 5.52)		1.16 (0.25, 5.39)	
CMT+RT vs. CMT	1.06 (0.23, 4.78)		1.26 (0.18, 8.97)	
Menopause				
Yes vs. no	2.08 (0.76, 5.64)	0.14	3.51 (0.96, 12.9)	0.038*
Histologic type				
Non EC vs. EC	3.09 (0.87, 11.00)	0.17	2.92 (0.63, 13.48)	0.19
Tumor grade				
Grade 2-3 vs. grade 1	5.57 (1.25, 24.80)	0.02*	7.43 (0.96, 57.75)	0.012*
Stage				
IIIA vs. IIIC1	0.72 (0.26, 1.95)	0.19	0.70 (0.22, 2.23)	0.54
IIIA vs. IIIC2	2.55 (0.53, 12.29)		1.60 (0.31, 8.27)	
IIIC1 vs. IIIC2	3.55 (0.76, 16.56)		2.27 (0.47, 10.95)	
Peritoneal washing				
Positive vs. negative	1.00 (0.22, 4.40)	0.99	1.20 (0.27, 5.36)	0.81
Pelvic node				
Positive vs. negative	0.88 (0.28, 2.80)	0.83	1.06 (0.28, 3.97)	0.92
Paraaortic node				
Positive vs. negative	0.54 (0.11, 2.61)	0.41	0.59 (0.12, 2.97)	0.50
Myometrial invasion				
>50% vs. no or ≤50%	1.33 (0.50, 3.55)	0.40	0.88 (0.31, 2.56)	0.59
LVSI				
Present vs. absent	1.49 (0.59, 3.78)	0.15	1.50 (0.52, 4.34)	0.27
Cervical involvement				
Present vs. absent	2.17 (0.84, 5.66)	0.06	2.16 (0.75, 6.20)	0.13

* Statistical significant

RT = radiation; CMT = chemotherapy; EC = endometrioid histology; LVSI = lymphovascular space invasion; HR = hazard ratio

Table 5. Cox proportional hazards regression model of disease free survival

Factors	Disease-free survival (n = 54)			Overall survival (n = 54)		
	Crude HR (95% CI)	Adjusted HR (95% CI)	p-value	Crude HR (95% CI)	Adjusted HR (95% CI)	p-value
Menopause						
Yes vs. no	2.08 (0.76, 5.64)	3.76 (1.24, 11.38)	0.013*	3.51 (0.96, 12.90)	5.26 (1.40, 19.83)	0.006*
Tumor grade						
Grade 2-3 vs. grade 1	5.57 (1.25, 24.8)	8.84 (1.86, 42.15)	0.003*	7.44 (0.96, 57.79)	10.83 (1.38, 85.04)	0.005*

Adjusted for age, histological type, stage, myometrial invasion, lymphovascular space invasion and cervical involvement

study is the MANGO-ILIADE III trial[17] that included 156 with stage IIB, IIIA-C disease (stage IIIA with positive cytology without other risk factors was not included) and excluded serous and clear cell histology. There was no significant difference in OS between CMT with RT and RT groups. Differently, pooling data of the both studies showed highly significance in better PFS in CMT with RT group (HR 0.63, 95% CI; 0.41-0.99, p-value = 0.009).

There are randomized trials reporting a comparison between CMT and RT. The GOG 122[6] found that CMT (cisplatin and doxorubicin) was superior to whole abdominal RT in advanced stage endometrial carcinoma, but Maggi et al[10] and Susumu et al[11] reported no significant difference between CMT (cisplatin, doxorubicin and cyclophosphamide) and RT arm in high-risk endometrial carcinoma.

The present study found a higher pelvic recurrence rate in the CMT group (30%) compared to RT (6%) and CMT with the RT group (9%). The result is not similar to Marchetti et al[13] that reported a higher local recurrence in RT group (22%) than CMT (4.2%) and combined (5.8%) groups. Other public studies described pelvic recurrence in RT treatment was about 7 to 12%[10-12], CMT treatment 8 to 16%[10-12] and combined treatment 6%[12]. The present study showed that distant recurrence might be reduced by CMT with RT. The distant recurrence reported a 33.3% in the RT group, 30% in the CMT group, and 18% in CMT with the RT group. It was similar to other trials that reported distant recurrence 14 to 30% in RT groups[10-13], 16 to 42% in CMT group[10-13], and 5 to 22%[12,13] in combined group.

The present study showed that only tumor grading and menopausal status were associated with DFS and OS. It was quite similar to other studies. Marchetti et al[13] reported an age older than 65 years old and tumor grading were independently associated with relapse-free survival. Secord et al[12] reported that age, race, tumor grade 2-3, and serous histology were associated with PFS and OS. Randall et al[6] found that grade 3 tumor, older age, serous histology, and African American race were associated with shorter PFS and OS.

The limitation of the present study was the small number of the patients and short follow-up time, which caused insufficient power to detect statistical significance in DFS or OS among groups. Secondly, pelvic and paraaortic lymphadenectomy was not uniformly performed, and that may have resulted in inaccurate surgical stage. Because this study was a retrospective study, there was no practice guideline for adjuvant treatment that resulted in selection bias for the type of adjuvant therapy. Lastly, the complications of each treatment modality could not be completely recorded, which would be useful in the decision making, regarding treatment.

In conclusion, the DFS and OS in stage III endometrial carcinoma patients who received adjuvant treatment were quite good. The present study does not show the difference among adjuvant groups, however, a phase III randomized control trial with effective protocol should be conducted to determine the most effective adjuvant modality in stage III endometrial carcinoma.

What is already known on this topic?

The appropriate adjuvant treatment of endometrial carcinoma stage IIIC is not well established.

There are three randomized control trials that CMT is not inferior to RT. There are many retrospective studies showed that combined CMT with RT is better than single modality in both DFS and OS. We are waiting for the result of clinical trial for patients with advanced endometrial carcinoma (PORTEC-3, GOG 258).

In Thailand, the data about adjuvant treatment of advanced endometrial cancer were limited.

What this study adds?

The DFS and OS were not different between adjuvant treatment groups in our institute that different from previous studies.

This finding confirms that tumor grading is associated with DFS and OS. The other factor is menopausal status.

Potential conflicts of interest

None.

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การให้รังสีรักษา การให้ยาเคมีบำบัดหรือการรักษาหลายวิธีร่วมกันหลังการผ่าตัดของมะเร็งเยื่อบุโพรงมดลูกระยะที่ 3 ในภาคใต้ตอนล่างของประเทศไทย: อัตราการกลับเป็นซ้ำและอัตราการอยู่รอด

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วัตถุประสงค์: *เพื่อศึกษาอัตราการอยู่รอด และระยะปลอดโรคของผู้ป่วยมะเร็งเยื่อบุโพรงมดลูกระยะที่ 3 ที่ได้รับการรักษาหลังผ่าตัด โดยรังสีรักษา และ/หรือ ยาเคมีบำบัด*

วัสดุและวิธีการ: *รวบรวมข้อมูลย้อนหลังของผู้ป่วยมะเร็งเยื่อบุโพรงมดลูกระยะที่ 3 ที่ได้รับผ่าตัดและได้รับการรักษาหลังผ่าตัดโดยรังสีรักษา และ/หรือ ยาเคมีบำบัด ตั้งแต่วันที่ 1 มกราคม พ.ศ. 2546 ถึงวันที่ 31 ธันวาคม พ.ศ. 2555 วิเคราะห์อัตราการอยู่รอดโดยวิธี Kaplan-Meier และ Cox proportional hazard model*

ผลการศึกษา: *จากผู้ป่วยทั้งหมด 54 ราย ร้อยละ 61 ได้รับการรักษาหลังผ่าตัดโดยรังสีรักษา ร้อยละ 19 ได้รับยาเคมีบำบัด และร้อยละ 20 ได้รับรังสีรักษาและเคมีบำบัด ค่ามัธยฐานของระยะปลอดโรคคือ 36.7 เดือน อัตราการปลอดโรคและอัตราการอยู่รอดที่ 3 ปี คือร้อยละ 51.9 (95% CI ร้อยละ 36.3-74.1) และร้อยละ 70.6 (95% CI ร้อยละ 57.4-86.8) ตามลำดับ ไม่มีความแตกต่างกันระหว่างชนิดของการรักษา มะเร็งเกรด 2-3 และภาวะหมดระดูเป็นปัจจัยที่มีผลต่อระยะปลอดโรคและระยะการอยู่รอด*

สรุป: *อัตราการอยู่รอดและอัตราการปลอดโรคของผู้ป่วยมะเร็งเยื่อบุโพรงมดลูกระยะที่ 3 ค่อนข้างดี หากได้รับการรักษาร่วมหลังผ่าตัด การศึกษาเปรียบเทียบแบบสุ่มจะทำให้ทราบถึงวิธีที่เหมาะสมที่สุดในการรักษาร่วมหลังผ่าตัดในผู้ป่วยเหล่านี้*