

Impact of Surgery Extent on Survival and Recurrence Rate of Stage I Endometrial Adenocarcinoma

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Abstract

The total number of 349 patients of stage I endometrial adenocarcinoma treated with surgery in Qingdao University Affiliated Hospital from January 2007 to December 2012 were analyzed retrospectively. They were divided into two groups: Group A (extrafascial hysterectomy plus bilateral salpingo-oophorectomy) and Group B (extrafascial hysterectomy or extensive hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymph node dissection), and then the survival and recurrence conditions were explored. The five-year survival rates of the two groups were 98.35% and 97.7% respectively ($P>0.05$). Among the 349 patients, there were 6 patients who recurred within 2 to 38 months. The recurrence rates of Group A and Group B were 1.67% (3/178) and 1.75% (3/171) respectively ($P>0.1$). In this study, there were 129 stage I A moderately differentiated patients. None of the 17 patients who adopted adjuvant treatments relapsed; 4 of 112 patients without post-operative treatment recurred. There was no significant difference of recurrence rates ($P>0.05$). This study showed that to stage I endometrial adenocarcinoma patients, lymphadenectomy will not promote the survival rate and lower recurrence rate, however, to patients with risk factors it is still necessary to explore lymphadenectomy and adjuvant therapy. Perhaps adjuvant therapy can benefit the stage I A moderately differentiated patients.

1. Introduction

Endometrial carcinoma is one of the three major female genital tract malignant tumors, accounting for about 7% of female malignant tumors. Recently, with the rapid development of economy, the change of people's eating habits, the occurrence of irregular hormone replacement

therapy and hormone abuse, the incidence of endometrial cancer tends to be higher and younger. Surgery is presently the main treatment for early stage endometrial cancer. Although 2011 national comprehensive cancer network (NCCN) guideline points out that comprehensive surgical staging is necessary, surgical scope draw our concern with the comprehensive cancer treatment and the continuous improvement of individual principle in clinical.

In my study, clinical materials of 349 stage I

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endometrial adenocarcinoma patients were analyzed retrospectively. They were diagnosed with stage I in Qingdao University Affiliated Hospital according to the criterias made by Federation of International Gynecology and Obstetrics (FIGO) in 2009. Our study aims to provide some reference for the treatment of stage I endometrial adenocarcinoma.

2. Materials and Methods

2.1 Study Subjects

349 cases of stage I endometrial adenocarcinoma who received operation in Qingdao University Affiliated Hospital between January 2007 and December 2012 were selected. All the 349 patients had complete clinical data and were pathologically diagnosed as stage I by 2009 FIGO standards. Age ranged from 23 to 76 years old (mean age: 54.2 ± 7.9). A total of 236 cases, accounting for 67.6% of all the patients were with high-risk age (range from 45 to 63 years old). Telephone interviews were adopted to follow up patients and the follow-up time is 3-72 months. We had formal written consents of all the patients.

2.2 Methods and data collections

Surgery extent depended on preoperative curettage, intraoperative frozen pathologic findings or intraoperative cross-sectional condition of uterine. Poorly differentiated, type II endometrial cancer, more than 1/2 of muscular invasion or over 50% of the uterine cavity were high risk factors for cancer tissues. Therefore, patients with high risk factors were necessary to obtain extrafascial hysterectomy, salpingo-oophorectomy, pelvic and para-aortic lymphadenectomy. In this study, the 349 patients were divided into two groups: Group A extrafascial hysterectomy and bilateral salpingo-oophorectomy (a total of 178 cases), and Group B-extrafascial hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymphadenectomy (a total of 171 cases). After operation, patients with high risk factors accepted adjuvant therapy, including pelvic external radiation therapy for one course

(22cases, about 6.30% of the whole patients), chemotherapy for one to six courses (30cases, taking up 8.60%) and hormone therapy (14 cases, accounting for 4.01%). Among these patients, the number of those who accepted two kinds of adjuvant therapy is 6, accounting for 10%.

2.3 Statistical methods

Qualitative variable was analyzed using chi-square test and Fisher exact test and survival data was analyzed through Kaplan-Meier method. All analyses were conducted using SPSS17.0 software packet.

3. Results

Basic information of 349 cases of patient was shown in table 1 below.

Table 1 The comparison of basic information in both Group A and Group B

Total cases	Group A	Group B	P value	
Total cases	349	178	171	
age		53.75	54.31	>0.05
Hypertension	160	123	37	>0.05
Diabetes	155	53	102	>0.05
Well differentiated	34	2	32	<0.05
moderately differentiated	299	162	137	
Poorly differentiated	50	16	34	
myometrial invasion depth <1/2	128	54	74	<0.05
myometrial invasion depth \geq 1/2	50	27	23	

3.1 Influence of operation scope on survival rate

Survival data of patients with stage I endometrial adenocarcinoma who were diagnosed through surgical pathology staging was analyzed using Kaplan-Meier method, and five-year survival rate of Group A and Group B was 98.3% and 97.7% respectively. There was no statistical significance between the two groups ($P>0.05$). Survival curves were shown in Fig1.

3.2 Impact of operation scope on recurrence rate

Among the 349 patients, 6 cases relapsed, and 3 cases relapsed in both Group A and Group B, with the recurrence rate of 1.67% and 1.75%

respectively. There was no statistical significance ($P>0.1$). There was three pelvic metastasis out of six, two cases in Group A and one case in Group B. The other three cases had distant metastasis, including one case in Group A and two cases in Group B. Local recurrence rate was 66.67% and 33.33% respectively, and distant metastasis rate was 33.33% and 66.67% respectively.

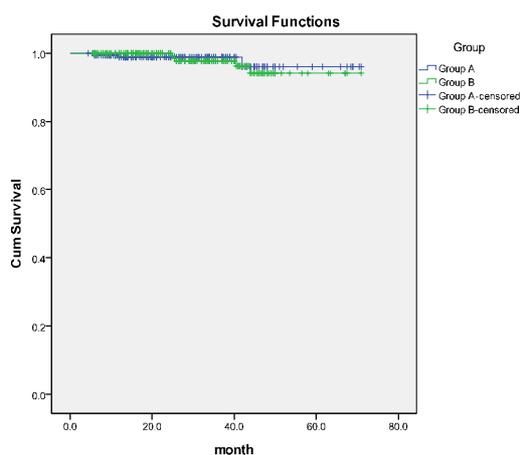


Fig1. Survival curves of Group A and Group B were shown.

Note: Group A stands for extrafascial hysterectomy and bilateral salpingo-oophorectomy, Group B stands for extrafascial hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymphadenectomy.

3.3 Choose adjuvant therapy or not for stage I A moderately differentiated endometrial adenocarcinoma?

129 cases diagnosed with stage I A moderately differentiated endometrial adenocarcinoma, no one relapsed among the 17 cases who accepted adjuvant therapy and four cases recurred among 112 patients without adjuvant therapy. The recurrence rate was no statistical significance ($P>0.05$).

3.4 The choice of surgery procedure and adjuvant therapy for those with high risk factors

The number of patients with high risk factors was 84 out of 349 patients. Most cases underwent extrafascial hysterectomy plus bilateral salpingo-oophorectomy and pelvic and para-aortic lymphadenectomy (66/84), there were 38 patients

who adopted adjuvant therapy after operation. The survival rate is 98.81% (83/84).

4. Discussion

Endometrial carcinoma is a common gynecological tumor. Women have probability to suffer from it from reproductive age to postmenopausal age. Besides, women from 50 to 69 have a high incidence [1-3]. In this study, the age of patients with stage I endometrial adenocarcinoma was from 45 to 63 years old, younger than those reported in papers. This may be due to endometrial adenocarcinoma belonging to type I endometrial cancer, which occurs in relatively young age; or perhaps the age of endometrial carcinoma is indeed younger than that in the past. For these patients, it is very important to receive a proper surgery procedure and adjuvant therapy. 70% to 90% endometrial carcinoma patients are diagnosed in early stage for irregular vaginal bleeding and increased vaginal drainage, only a few of patients in advanced stage [4]. Early stage endometrial cancer is still given priority to surgery, but as the improvement of comprehensive treatment and individualized principle, operation scope has become a growing focus point. It is reported that incidence of lymph node metastasis in clinical stage I is 5%-16% [5-8]. Although the complications of lymph node dissection are rare, it can't be neglected [8-10]. Lin et al. [11] explored the recurrence conditions of stage I endometrial carcinoma patients who underwent hysterectomy and bilateral oophorectomy only, and followed up for two years, then they found that nobody relapsed for those stage I a and I b (that is stage I A according to FIGO 2009 staging system), and recurrence rate was up to 33% for stage I c patients (that is stage I B according to FIGO 2009 staging system) who had bulky lump or deep myometrial invasion or was in poorly differentiated condition, for which they believed stage I c patients with risk factors should accept expanded surgery procedure and adjuvant therapy. However, Gao Jinsong et al. [12] believed that there was no increased survival rate

after expanding surgery scope or undergoing lymph node dissection for patients surgical staging diagnosed with stage I endometrial carcinoma. For those with risk factors, lymph node dissection or lymph node biopsy can help clarify staging and prognosis, besides, in the presence of risk factors, adjuvant therapy is helpful. At present, special type of endometrial cancer is an essential element to expand operation scope or undergo lymphadenectomy or accept adjuvant therapy [13], but there is still some controversy to choose surgery extents for early stage endometrioid adenocarcinoma patients.

In this study 349 cases diagnosed by surgical pathology staging with stage I endometrial adenocarcinoma were retrospectively analyzed. There was no significant difference between the five-year survival rate of the two groups, with the survival rates of 98.3% and 97.7% respectively. It is reported that five-year survival rate of stage I A/ I B well/moderately differentiated endometrial adenocarcinoma was 95%[14], which is consistent with survival rate in this study. The recurrence rate of the two groups is not statistically significant. So we can conclude that expanded surgery extent can not improve survival rate and reduce recurrence rate for stage I endometrial adenocarcinoma. As reported, early stage endometrial cancer patients with distant metastasis accounted for more than 50% of those who relapsed, and most relapsed in 3 years [15]. In this study, there were six cases who relapsed ranging from postoperative 2 to 38 months, of which three cases metastasized to the distant, this is consistent with reported papers. For those with risk factors, most cases tend to undergo extrafascial hysterectomy or extensive hysterectomy plus bilateral salpingo-oophorectomy and pelvic and para-aortic lymphadenectomy, and only a few choose extrafascial hysterectomy plus bilateral salpingo-oophorectomy because of their old age, complex complications. According to treatment guideline, for patients with stage I A moderately differentiated endometrial adenocarcinoma, extrafascial hysterectomy plus bilateral salpingo-oophorectomy can be used as standard

surgery procedure. In this study, there are 129 patients with stage I A moderately differentiated endometrial adenocarcinoma. Among 112 cases without adjuvant therapy four cases relapsed, and none recurred of 17 patients with adjuvant therapy. Although there is no significant difference, however, the relapsed patients are few and the sample is limited, the meaning of adjuvant therapy for stage I A moderately differentiated endometrial adenocarcinoma need further study.

5. Conclusion

In conclusion, it is useful of lymph node dissection for determining staging and getting prognosis known, however, lymphadenectomy can not improve survival rate and reduce recurrence rate. Besides, lymphadenectomy can increase incidence of complications and reduce life quality. For stage I patients without risk factors, it is a good choice to undergo extrafascial hysterectomy plus bilateral salpingo-oophorectomy. Further studies are needed to decide whether adjuvant therapy is necessary for patients with stage I A moderately differentiated endometrial adenocarcinoma due to the limited sample and follow-up time and the few of recurrence.

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