

Study to determine 05 year survival rate in women with gynaecological cancer (endometrial) undergoing radical hysterectomy with lymph node dissection

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Abstract

Background: This is a retrospective observational study that aimed to assess the overall 5 year survival rate of patients with endometrial malignancies who underwent radical hysterectomy with lymph node dissection in ASCOMS, Jammu. This Study was conducted from the time period of January 2021 - Jan 2023 ,55 patients presented with stage I - II endometrial cancers.

Methods: A histological grading of endometrial carcinoma was determined before surgery as follows: G1 (low grade): non-squamous or mulberry-like solid growth area of 5%; G2 (medium grade): non-squamous or mulberry-like solid growth area of 6% to 50%; and

G3 (high grade): non-squamous or mulberry-like solid growth area of > 50%.

Results: Pathological staging of endometrial carcinoma was judged. In our study overall survival rate at 5 years was 98.18% (54 Cases) & 1.81 % (1) cases as deceased.

Conclusions: Lymph node dissection will still be necessary in endometrial oncology until molecular diagnostics have developed sufficiently and efficacious systemic therapies are available.

Keywords: Lymph, Cancer, LND.

Introduction

Endometrial cancer is one amongst the common gynaecologic cancers of the female genital tract in developed and developing countries, and it occurs in

perimenopausal and postmenopausal women, with a peak incidence between 50 and 60 years of age. Most patients with endometrial cancer are diagnosed at an early stage and can be treated surgically with good outcome. Numerous studies have shown that prognostic factors in endometrial carcinoma include age, pathological type, histological grade, pathological staging, myometrial invasion, tumor location, tumor size, lymph vascular space invasion, cervical involvement, ovarian metastasis, lymph node metastasis, peritoneal lavage cytology, and hormone receptor status that help us in deciding the further course of management for our patients. Pathological staging and histological grade have been recognized as 2 important prognostic factors. Complete surgical staging for endometrial cancer includes peritoneal cytology, exploration of the peritoneal cavity, extra fascial total hysterectomy, bilateral salpingo-oophorectomy, and systematic pelvic and para-aortic lymphadenectomy. With the development of surgical procedures, pelvic and paraaortic lymph node dissection (LND) have become an integral part of the surgical treatment of endometrial cancers.

Aim & Objective

To assess the overall 5 year survival rate of patients with endometrial malignancy who underwent radical hysterectomy with lymph node dissection in tertiary care centre.

To assess the treatment outcomes of 5-year disease free survival rate and their quality of life

Material & Methods

The study was conducted on patients admitted in gynecological OPD and IPD after taking ethical clearance from the Ethical Committee in Acharya Shri Chandar College of Medical Sciences and Hospital,

Jammu. It was an observational retrospective study with a total of 55 patients that presented with stage I-II endometrial cancers. All the patients were subjected to the initial surgical staging procedure. All the surgeries were performed by one surgeon. The data of all patients were collected, including age, height, weight, complications (history of hypertension and diabetes), family history of malignant tumor in first-degree relatives, menstrual history, pregnancy history, surgical-pathological staging, pathological type, histological grade, myometrial invasion, cervical and ovarian metastasis, tumor location, tumor size, surgical method, and postoperative adjuvant therapy. A histological grading of endometrial carcinoma was determined before surgery as follows: G1 (low grade): non-squamous or mulberry-like solid growth area of 5%; G2 (medium grade): non-squamous or mulberry-like solid growth area of 6% to 50%; and G3 (high grade): non-squamous or mulberry-like solid growth area of > 50%. Pathological staging of endometrial carcinoma was judged. Laparotomy was performed via midline supraumbilical incision and total abdominal hysterectomy with bilateral salpingoophorectomy was done followed by pelvic and paraaortic lymph node dissection.

Inclusion Criteria

- Patients with endometrial cancer stage I-II low grades.
- Endometrioid endometrial cancers (“Type I cancers”) confirmed during surgical intervention for treatment.

Exclusion Criteria

- In patients of type II endometrial cancers (papillary serous and clear cell variety)

- In patients with high grade endometrial cancers beyond IIB & IIIC respectively.
- Patients with distant metastasis.
- Patients with severe comorbidity not fit for surgery
- Patients with recurrence
- Patients who were lost after surgery for follow up

Study Design:

- Study Type : Observational retrospective
- Number of participants: 55
- Follow-Up Duration: 2-5 Years
- Study Start Date : January , 2021
- Completion Date : January , 2023

Pre Operative

1. Complete history of each case was taken along with the age, BMI, GPE, menopausal status & their risk stratification was done.
2. Per speculum & a per vaginal examination, PAP smear taken & findings were noted.
3. All prognostic factors were taken into consideration after complete diagnostic tests.
4. A written consent was taken from the patients after explaining all the risks & prognosis

Operative Procedure

Laparotomy was performed via midline supraumbilical incision and total abdominal hysterectomy with bilateral salpingoophorectomy was done which was followed by lymph node dissection done through a transperitoneal approach taken and via retroperitoneal incision, pararectal and paravesical spaces developed with blunt dissection and obliterated umbilical artery visualised on either side of the bladder, external iliac vessels visualised, ureter identified and retracted medially. The pelvic lymph node dissection was initiated by dissecting the lateral nodal tissue away from the

psoas muscle. Care was taken to identify and isolate the genitofemoral nerve, which can easily be misidentified as a lymphatic channel, at this point fibrofatty tissue surrounding external iliac were elevated and samples taken. For obturator lymph nodes obturator fossa entered & obturator nerve identified and samples taken.

Post Operative Complications

1. Fever
2. Pain
3. Ileus
4. Venous Thromboembolism (VTE)
5. Lymphedema / Lymphocyst
6. Wound dehiscence

Results:

The onset age of 55 patients was distributed between 36 and 78 years, the average age at onset was 54.93 ± 8.36 years, and the median age was 55 years. Among them, 3 cases (5.45%) were <55 years old and 52 cases (94.54%) were ≥ 55 years old.

There were 44 cases (80%) with simple abnormal vaginal discharge; 7 cases (12.2 %) with vaginal bleeding and abnormal discharge, 3 cases (5.45%) with lower abdominal pain, and 1 case (1.81%) with asymptomatic or only palpable lower abdominal mass. There were 15 cases (27.27%) complicated with hypertension, 7 cases complicated with diabetes (12.72%), 3 cases (5.45%) complicated with hypertension and diabetes, and 15 cases (27.27%) complicated with obesity.

All the patients were initially treated with surgery, 16 cases (29.10%) underwent total hysterectomy with bilateral salpingoophorectomy and 39 cases (70.90%) underwent radical hysterectomy; 29 cases (74.35%) underwent pelvic lymphadenectomy whereas in 10 cases (25.64%) pelvic lymphadenectomy was not done due to

tumor size less than 2cm. In addition, 38 cases (69%) did not receive postoperative adjuvant therapy, 13 cases (23.63 %) received postoperative adjuvant

chemotherapy, 3 cases (5.45%) received postoperative adjuvant radiotherapy.

Table 1 : Clinical data of 55 patients with endometrial carcinoma.

	Clinical data	Cases	Percentage (%)
Age	<55 yrs	3	5.45
	≥55 yrs	52	94.54
Clinical symptoms	Abnormal vaginal discharge	44	80
	Vaginal bleeding + abnormal discharge	7	12.72
	Lower abdominal pain	3	5.45
	Asymptomatic or hypogastric mass	1	1.81
Co morbidities	Hypertension	15	27.27
	Diabetes	7	12.72
	Hypertension + diabetes	3	5.45
	obesity	15	27.27
Surgical method	Total hysterectomy with bilateral salpingoophorectomy	16	29.10
	Radical hysterectomy	39	70.90
Lymphadenectomy	Yes	29	74.35
	No (tumor Size< 2cm)	10	25.64
Treatment	Surgery	38	69
	Surgery + chemotherapy	13	23.63
	Surgery + radiotherapy	3	5.45

Table 2 : Post-Operative Complications

Complications	Cases	Percentage (%)
Fever	18	32.72

Pain	55	
Ileus	5	9.09
VTE (Venous Thromboembolism)	1	1.81
Lymphedema / Lymphocyst	3	5.45
Wound Dehiscence	2	3.63

Discussion

Many studies have confirmed that lymph node metastasis is a main prognostic factor and basis of postoperative adjuvant therapy. It is generally believed that high-risk factors of lymph node metastasis are high histological grade, deep myometrial invasion, cervical involvement, and high-risk pathological types. In our study overall survival rate at 5 years was 98.18% (54 Cases) & 1.81 % (1) case as deceased because of chemotoxicity. The study was conducted on 55 women with Endometrial Cancer of which 3(5.45%) were <55 years of age and 52(94.54%) were >55yrs. 44 cases (80%) had abnormal vaginal discharge, 7 Cases (12.72%) had Vaginal Bleeding +abnormal discharge, 3 cases (5.45%) had Lower abdominal pain & 1 case (1.81%) had hypogastric mass or asymptomatic. In the above cases, 15 cases (27.72 percent) suffered from hypertension, 7 cases (12.72 percent) suffered from diabetes, 3 cases (5.45%) were afflicted with hypertension & diabetes, and 15 cases (27.72 percent) were afflicted with obesity, indicating that these women are more likely to develop endometrial cancer. A radical hysterectomy was performed in 39 cases (70.90%) out of 55 cases & a total hysterectomy with bilateral salpingoophorectomy was performed in 16 cases (29.10%). A total of 29 (74.35) lymphadenectomy surgeries were performed amongst 39 cases. Among the

55 cases, 38 (69%) were treated with simple surgery, 13 (23.63%) were treated with surgery plus chemotherapy, and 3 (5.45%) were treated with surgery plus radiotherapy. Amongst the post-operative complication, fever was a common finding in 18(32.7%) patients and was mostly reactionary for which higher antibiotics were given. 55 patients were given analgesics and nsoids to effectively relieve pain. A total of 5 cases (9.09%) had ileus as a result of excessive bowel handling for which they were treated conservatively. Compression stockings & early mobility prevented 54 patients from developing Venous Thromboembolism, however 1 case developed DVT after prolonged immobilisation due to pain and weakness, which was treated with anticoagulants. Lymphedema / lymphocysts were detected in 3 cases (5.45%). 2 (3.63%) diabetic cases developed wound dehiscence, requiring hospitalization for 15-20 days and alternate day dressings.

The retrospective analysis of 142 cases of endometrial carcinoma by Leszek Gottwald showed that deep myometrial invasion and tumor diameter can be used to evaluate the status of lymph node metastasis. In his study the disease-free Survival rate & Overall Survival rate are 81.7 % & 83.1% respectively. Another study by Hirai et al. in 286 patients showed that 94% of stage I patients were recurrence-free after 5 years, 71% of stage

II patients after 5 years, and 38% of stage III patients after 5 years.

Conclusion

Lymphadenectomy was associated with increased survival rate in stage I endometrioid endometrial cancer. With the improvement of surgical and anesthesiological techniques, systematic Lymph Node Dissection was recommended for all endometrial cancer patients. It then became apparent that patients with stage I disease (endometrioid) had a disease-specific 5-year survival of 96% with or without Lymph Node Dissection. Only stage I grade 3 cancers and those of stage \geq II had a significant benefit from Lymph Node Dissection.

The significance of lymph node dissection in gynecological oncology is reviewed in the light of our current knowledge of tumour biology. The original 'centrifugal theory' of metastasis formation leading to the concept of 'radical' surgery has its limitations. Lymph node dissection will still be necessary in gynecological oncology until molecular diagnostics have developed sufficiently and efficacious systemic therapies are available.

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