



“ROLE OF ADJUVANT RADIOTHERAPY IN CARCINOMA ENDOMETRIUM”

Dr. B. Padmavathi*

M.D, RT Assistant Professor, Dept.of Radiotherapy (Radiation Oncology) Govt. General Hospital / KMC, Kurnool, Andhra Pradesh, India *Corresponding Author

ABSTRACT

Back Ground: Endometrial carcinoma usually present in 6th and 7th decades of life averages age of 60. Endometrial cancer is the most common gynecological cancer presenting a decade earlier when compared with western world. Surgery is the primary treatment for non metastatic endometrial carcinoma followed by adjuvant radiotherapy used in selected cases depending upon adverse histopathological features like stage and grade.

Topic was undertaken to study the significance of adjuvant radiotherapy in post operative cases of carcinoma endometrium in decreasing the recurrence.

Methods : 20 patients of postoperative cases of carcinoma endometrium were selected depending up on the post operative histopathological report. The entire patient were given adjuvant radiotherapy.

Results : 30% of patients developed grade I gastrointestinal, toxicity. 30% of patients developed grade I bladder toxicity. 19 patients completed adjuvant radiotherapy along with brachytherapy, 1 patient received intracavitary brachytherapy only.

Conclusion : Adjuvant radiotherapy (External Beam radiotherapy plus vaginal brachytherapy) to operative cases of carcinoma endometrium, significantly decreased the relapse.

KEYWORDS : Adjuvant Radiotherapy, Stage, Grade, Histological Feature, Vaginal Brachytherapy and Relapse.

INTRODUCTION

Endometrial carcinoma is one of the commonest gynaecological cancers in the western world. Most endometrial cancers are diagnosed with stage-I disease. The initial treatment of stage-I disease is usually surgery involving total abdominal hysterectomy and bilateral salpingo ophrectomy (TAH+BSO). Pelvic external beam radiotherapy and or vaginal brachytherapy may be given as adjuvant treatment to reduce the risk of recurrence. The decision to treat depends on whether the patients have high risk factors including the stage of disease, depth of myometrium invasion, grade of the tumor, lymphovascular invasion and the age of the patient as several retrospective series have suggested that these factors are important in determining the recurrence and death rates.

Both pelvic external beam radiotherapy and vaginal intracavitary brachytherapy (to lesion extent) carries the risks of acute toxic effects and long term complications. The acute side effects of pelvic radiotherapy (on the skin, gastrointestinal (GI) tract and genitor urinary tract) settle down in the majority of patients following treatment.

OBJECTIVE

The main objective is to study the significance of adjuvant radiotherapy in Carcinoma Endometrium.

MATERIALS & METHODS

Aim: To study the significance of adjuvant radiotherapy in carcinoma endometrium.

Target Population:

Study group: 20 patients with previously untreated carcinoma. Endometrium were analyzed in the study.

Inclusion Criteria:

1. Age upto 80 years
2. Histologically confirmed by biopsy – Adenocarcinoma
3. Stage-IA - grade 2 to grade-3 – III C 1
4. ECOG performance status 2 (or) below.

Exclusion criteria:

1. Age > 80 years
2. Any evidence of distant metastasis
3. Previously treated case carcinoma of endometrium
4. PS – ECOG > 2

Pre-treatment evaluation:

Initial clinical evaluation consists of careful history and physical examination & following investigations.

- CBP (Including platelets)
- Endometrial biopsy – Gold standard with 90%, 85% specificity
- D&C if endometrial biopsy is non diagnostic
- Pap smear has limited sensitivity (as low as 40%)

Imaging:

- Chest X-ray
- CT Scan (or)
- MRI of abdomen and pelvis (or)
- Transvaginal ultrasound to evaluate symptomatic disease
- Cystoscopy and (or) proctoscopy as clinically indicated.

Optional:

- CA 125
- LFT/RFT
- Consider genetic counseling testing for young patients <55 years those with a significant family history of endometrial cancer.

All the cases of carcinoma Endometrium PO with Stage-I Grade 2-3-III C1 were taken.

All the cases are evaluated after 2-3 weeks of surgery with clinical examination and local examination.

Radio therapy was planned for whole pelvis after complete healing surgical wound.

Dose 4500 cGy to 5000 cGy was given by external beam radiation therapy.

Patient was evaluated every week for RT related side effects.

After the end of EBRT local Examination (per Vaginal Examination) was done to know the vaginal length.

Intracavitary radio therapy was given with vaginal cylinder appropriate size .5 to 3 cm, dose 700 or 500 cGy weekly with gap of 1 week between 3 fractions.

OBSERVATIONS & RESULTS

The demographic characteristic of the study.

- 40% of patients – 41 to 50 years
- 35% of patients – 51 to 60 years
- 10% of patients – 31 to 40 years
61 to 70 years

Among 20 patients 2 patients seen with BMI (Body Mass Index) of >33 Kg/Msq

2 patients are Hypertensive – more than 2 years
 2 patients are with long standing diabetes
 1 case is Nullipara

55% cases are in Stage IB Grade – 2
 10% cases are 3 in Stage IB Grade – 3
 5% cases are in Stage-IIIA Grade-1
 5% cases are in Stage-IIIA Grade – 2
 5% cases are in Stage-IIIA Grade – 3
 10% cases are in Stage-II Grade – 3
 10% cases are in Stage-III CI Grade – 2

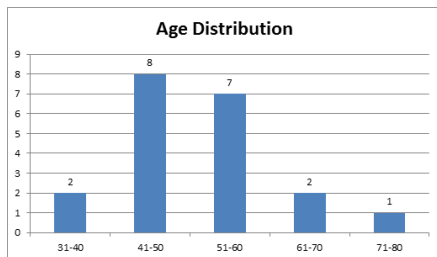
All patients received adjuvant radiotherapy with minimal side effects like diarrhea and vomiting.

On 18 months follow up no case was relapsed.

Adjuvant Radiotherapy in carcinoma Endometrium definitely decrease the pelvic failure rates.

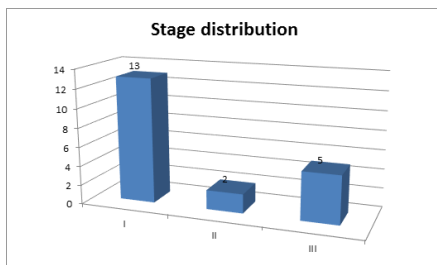
Age Distribution:

Age in Years	No.of Patients	Percentage
31-40	2	10%
41-50	8	40%
51-60	7	35%
61-70	2	10%
71-80	1	5%



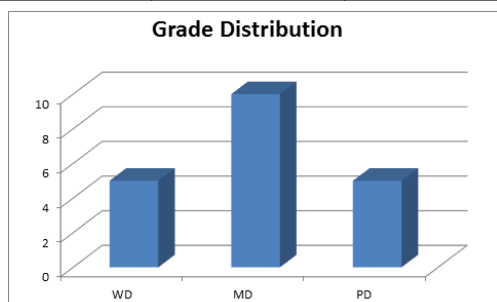
Stage Distribution:

Stage	No.of Patients	Percentage
I	13	65%
II	2	10%
III	5	25%



Grade Distribution:

Grade	No.of Patients	Percentage
WD	5	25%
MD	10	50%
PD	5	25%



DISCUSSION

The topic was selected to study the significance of adjuvant radiotherapy in Carcinoma of Endometrium in reducing the pelvic failure rates.

The main modality of treatment in carcinoma endometrium is surgery. The role of radiotherapy is determined based on surgical stage, prognostic factors of depth of myometrial invasion, histological tumor grade, pathological subtype, cervical involvement, presence of lymphovascular space invasion and extent of disease (Extra uterine involvement) serosa, adnexa, peritoneal fluid, lymphnodes or intraabdominal spread. Approximately 75-80 percent of patients present with early stage endometrial cancer.

Vaginal brachytherapy alone may be considered for patients with low grade histological and superficial tumors who have had an adequate lymphnode dissection.

Patients with surgical stage III & IV disease are at high risk of developing recurrent disease, after surgery if no adjuvant therapy is administered.

Approximately, 10% of patients with clinically confined endometrial cancers are found postoperatively to have involvement of serosa adnexal or peritoneal washings (Stage-IIIA) involvement of vagina pathological stage-IIIB or positive pelvic nodes stage-IIIC.

The standard pelvic radiotherapy external beam is 45-50 Gy 1.8-2Gy daily fractionation.

Vaginal brachytherapy is delivered utilizing low dose rate or high dose rate techniques.

Excellent local control rates, and low morbidity has been demonstrated using both techniques.

Protect-I:

(Creutzberg et al 2000; Scholten et al 2005) Seven hundred and fourteen patients with IB G2-3 or IC G1-2 treated with TAH/BSO randomized to observation vs. WP Rt decreased RR (14-4%), with 75% of failures occurring in the vaginal vault. No difference in OS (81 Vs 85%) or DM (8vs7) Update with 10 year f/u and central pathology review of 80% of patients confirmed WP RT continued to reduce LRR(14-5%) without an OS benefit (66vs.73%), even after excluding IB Grade-I patients. Patients with 2 or more risk factors (Age> 60 years, grade-3, and >50% myometrial invasion) had greatest LRR benefit with RT (23-5%).

In my study 20 patients were enrolled for adjuvant radiotherapy. Among these patients who received only vaginal cylinder brachytherapy was given 700 cGy in 3 fractions. All other patients receive pelvic RT of 50 Gy and vaginal brachytherapy with cylinder 500 cGy in 3 fractions. In my short term follow up of 18 months no local recurrence was found.

Post operative adjuvant radiotherapy in carcinoma endometrium significantly associated with decreased locoreginal relapse.

CONCLUSION

Adjuvant radiotherapy (External Beam radiotherapy plus vaginal brachytherapy) to post operative cases of carcinoma endometrium, significantly decreased the relapse.

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