Endometrial Carcinoma

Uterine cancer is the 4th most common and most curable of gynaecological cancers, if disease is confined to the uterus.

Risk factors include excessive and unopposed estrogen administration, obesity, nulliparity, environmental factors and genetic factors.

For it to be curable, early diagnosis is required. In office tissue procurement methods have largely replaced the fractional curettage or D&C. These cytological and aspiration techniques include Pap smear, endometrial aspirations with Issac's cell sampler, Jet washer Endometrial lavage & Endometrial brush. There is also vabra aspiration, Novak curette & the small diameter suction curette, the pipelle. If an office biopsy procedure specimen reveals complex hyperplasia, D&C is required as absolute diagnosis depends on histological examination.

Transvaginal sonography - The positive predictive value of transvaginal sonography for endometrial cancer or hyperplasia is high for thick appearing endometrium especially with irregular endometrial or myometrial borders. However for endometrial strips between 5 mm and 10mm, benign histology is frequently found. By this method it is simpler to diagnose polyps and submucous myomas also.

Further evaluation of post menopausal bleeding may require Colposcopy, Doppler ultrasound, Computed tomography (CT) or Magnetic resonance imaging (MRI) MRI also helps evaluating the depth of myometrial invasion.

Hysteroscopy

Direct visualization of the uterine cavity combined with tissue sampling helps reach a definitive diagnosis in most cases.

Prognostic factors

Clinical stage IA endometrial carcinoma is associated with 95% survival rates. There are several factors, which may help predict outcome. These include depth of myometrial invasion, cervical involvement, lymph node metastasis and peritoneal cytological findings. The prognosis depends so strongly on these findings that in 1988 the International Federation of Gynaecology and Obstetrics (FIGO) adopted a surgical staging system to replace the Clinical staging system.

Biological markers :

High levels of oestrogen and progesterone receptors are associated with better tumour differentiation, less myometrial invasion and lower incidence of nodal metastasis. DNA aneuploidy, increase in S phase fraction and DNA proliferative index are associated with poor survival.

Expression of human neu gene HER-2 / neu is more commonly identified in women with metastatic disease. So also mutations of the P 53 tumour supresser gene.

CA 125 levels have been high in some women and may indicate more advanced disease.

Treatment

Surgery is the primary treatment for 92-96% of women with endometrial carcinoma. At the time of surgery, peritoneal cytologic sampling, abdominal exploration, palpation and biopsy of any suspicious lymph nodes or lesions and abdominal hysterectomy and bilateral salpingooophrectomy are performed. Pelvic and paraaortic lymphadenectomy is appropriate when the specimen obtained on D&C or hysterectomy has poor prognostic features eg. grade III serous or clear cell tumour, middle or deep myometrial invasion or spread to cervix or adnexa. Deep myometrial invasion can be diagnosed on a frozen section. After primary surgical staging the extent of the disease can be determined and the field for adjuvant radiation therapy can be decided.

Laparoscopically assisted vaginal hysterectomy and Laproscopic nodal dissection have been recently reported in the management of Stage I endometrial carcinoma. Everything that is done during open surgical staging can be done by laparoscopy with the added advantage that the uterus can be removed vaginally.

Although staging in experienced hands has not been shown to significantly affect surgical morbidity, it has not been known to improve survival and the debate of whether to do lymphadenectomy or not will go on. Staging may reduce morbidity and cost of adjuvant radiotherapy. Every case must be individualized. If it is clinical stage I, laparoscopically assisted vaginal hysterectomy (LAVH) may be done first and if the lesion is extensive or invades more than half the myometrium on frozen section, lymphadenectomy may be carried out. Patients with Grade II or III lesions should undergo lymphadenectomy before LAVH. If LAVH is feasible an abdominal incision is avoided and we can decrease blood loss and hospital stay. Problems with laparoscopic management include requiring specialized expensive instruments and most important experience in doing laparoscopic surgery. Long term follow up reports will tell how efficient this procedure really is. It is possible that in future patients with well-differentiated lesions may be managed by vaginal hysterectomy and laparoscopic surgical staging.

Radiation therapy :

Primary radiation therapy is used in women who are very high risk for surgery and their number is very minimum.

Hormonal/Cytotoxic chemotherapy :

Systemic therapy with progestational hormones or cytotoxic chemotherapy may be given when endometrial carcinoma is widespread. Hormone therapy is preferable as it has less toxicity and the response is comparable. Women likely to respond usually have well differentiated tumours and positive oestrogen progesterone receptors.

Cytotoxic agents include Doxorubicin, Cisplatinum, Carboplatinum and Paclitaxel are often used for advanced or recurrent endometrial carcinoma when hormonal therapy is ineffective. Although adenocarcinoma of the endometrium is an oestrogen dependant tumour retrospective studies have shown that there is no increased risk of recurrence if oestrogen replacement therapy is given after the treatment of low risk Stage I endometrial carcinoma.

In the past decade it has been observed that many things relating to endometrial carcinoma are undergoing a change from the pathological description to treatment and future directions in diagnosis and management should be studied globally.

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