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Endometrial Carcinoma

1. GROSS DESCRIPTION

Specimen

— curettage/pipelle sample (on an outpatient basis: some cases are also detected by routine cervical smear).
— subtotal/total/radical hysterectomy/bilateral salpingo-oophorectomy/limited pelvic node dissection.
— size (cm) and weight (g).
— suboptimal fixation of the endometrium in a hysterectomy specimen can make accurate histological assessment problematic and this can be countered by post-surgical injection of formalin with a needle through the cervical os.
— most endometrial cancers present with abnormal vaginal bleeding and this is particularly significant in a postmenopausal patient. Investigation is by outpatient pipelle endometrial sampling and the retrieved fragments are usually very scanty and may require filtering from the formalin fixative. The role of the pathologist is not to phase the endometrium but to comment on whether any functional endometrium is actually represented and, if so, if it is benign, atypical or malignant. Atypical endometrium may represent a false-negative sample of a concurrent adenocarcinoma. Investigation also includes transvaginal ultrasound scan which can relate endometrial thickness to the menopausal status (postmenopausal usually <5 mm) and detect any focal lesions, e.g. polyps. Hysteroscopy allows direct visualization of the uterine cavity and more extensive sampling. Transcervical resection of the endometrium is reserved for benign dysfunctional endometrium. If there are histological features suspicious of or diagnostic of malignancy in biopsy material, MRI scan is used to assess tumour stage, in particular, the depth of myometrial invasion and the presence of cervical or extrauterine involvement. CT scan assesses more distant spread. Treatment of uterine cancers (carcinoma, sarcoma, carcinosarcoma) is by hysterectomy and bilateral salpingo-oophorectomy with peritoneal washings as part of the staging procedure. Modified radical hysterectomy (inclusive of vaginal cuff, parametria and limited regional lymphadenectomy) is considered for deeply invasive cancers, those with cervical involve-

ment or high-grade cancers (serous, clear cell, undifferentiated, squamous). They may also require post-operative chemoradiotherapy. Occasional locally advanced tumours are not amenable to resection and chemo-/radiotherapy is used as the first line of management.

Tumour

Site
— fundus, body, isthmus. Involvement of the lower uterine segment is unfavourable.

Size
— length × width × depth (cm) or maximum dimension (cm).

Appearance
— polypoid/papillary/solid/ulcerated/necrotic/haemorrhagic.
— malignant mixed mesodermal tumours are typically fundal and polypoid in an elderly patient and may protrude inferiorly through the internal cervical os.

Edge
— circumscribed/irregular.

Extent
— infiltration endometrium, myometrium, serosa, cervix.

Adjacent endometrium
— atrophic, hyperplastic, polypoid.

2. HISTOLOGICAL TYPE

The vast majority are adenocarcinoma of two main types although there is overlap between the categories:

— type I (prototype: endometrioid adenocarcinoma): peri-/postmenopausal, low parity, high socio-economic status, obesity, diabetes, hypertension, hyperoestrogenism (hormonal therapy or secreting tumour, e.g. ovarian sex cord-stromal), background endometrial hyperplasia. Microsatellite instability/PTEN mutations.
— type II (prototypes: serous and clear cell carcinoma): older patients, more aggressive, atrophic endometrium with precursor EIC (endometrial intraepithelial carcinoma). p53 mutations.

A minority of endometrial cancers are familial or associated with hereditary non-polyposis colorectal cancer. Cumulative dose of tamoxifen is also a risk factor.

Endometrioid adenocarcinoma
— 70–80% of cases.
— typical: low-grade well differentiated endometrial-type glandular pattern, perimenopausal, due to unopposed oestrogenic drive ± adjacent endometrial hyperplasia.