Cervical stroma (Core)

Cervical stromal invasion indicates Stage II endometrial carcinoma according to the current International Federation of Gynaecology and Obstetrics Staging System and is a core element for reporting.[1] Cervical stromal invasion is associated with a significant risk of recurrence and is a predictor of pelvic lymph node metastases.[2,3] However, the role of cervical stromal involvement as an independent prognosticator per se has been questioned.[4] Cervical stromal invasion often occurs in the presence of other adverse features such as high histologic grade, deep myometrial invasion and LVI.[5] In one study, the presence of these factors conferred worse disease-free survival in patients with Stage II endometrial cancer.[6]

Cervical stromal invasion is defined as infiltrative or expansile (pushing) tumour growth into the cervical stroma. Characteristics of infiltrative invasion include irregular glands, single cells or tumour cell clusters, and desmoplastic stromal reaction. In the absence of infiltrative features, assessment of stromal invasion is facilitated by comparing the architecture of the carcinoma with the normal endocervical crypts: expansile (pushing) invasion is favoured if there is altered architecture with complex cribriform or microacinar growth (exceeding what would normally be accepted as just intraglandular growth).[7]

Determination of cervical stromal invasion can be complicated by difficulties in demarcating the cervix from the lower uterine segment. By convention, the boundary is defined by the most proximal benign endocervical crypt.[8,9] Consequently, any invasion identified at the level of, or distal to, a benign endocervical crypt should be considered cervical stromal invasion.

Significant interobserver variation in the assessment of cervical involvement by endometrial carcinoma has been documented. McCluggage et al (2011) showed fair to good agreement among six experienced gynaecologic pathologists in this exercise.[8] While Zaino et al (2013) showed high agreement in determining whether the cervix is involved or not, but only slight agreement in the distinction between glandular and stromal involvement.[10] Problematic scenarios include: determination of the junction between the lower uterine segment and upper endocervix; the distinction between 'floaters' and true cervical glandular involvement; the distinction between cervical glandular involvement and stromal involvement; and the distinction between cervical glandular involvement and reactive non-neoplastic glandular lesions such as tuboendometrial metaplasia or changes secondary to recent biopsy.[8] Strict definitions as to what constitutes cervical stromal invasion and the boundary between cervix and lower uterine segment, as provided above, are likely to improve reproducibility. In addition, consensus diagnosis via intra- or inter-departmental consultation is encouraged.

A value of 'indeterminate' should be used sparingly and only in cases where there is genuine doubt; in such cases, it may be useful to state the reason for a response of indeterminate in the report.

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