The usefulness of IETA ultrasonographic characteristics for establishing endometrial malignancy and the preoperative ultrasound assessment of myometrial invasion in a tertiary hospital from Romania

Mihela Camelia Timovanu, Roxana Corduneanu, Andreea Coudu, Elena Ciojocanu, Vlad Gabriel Timovanu.

Abstracts

Introduction/Background With the shift in demographics towards an ageing, increasingly obese population, we will see a rise in estrogen-dependent endometrial pathology, including endometrial cancer. The first goal of the study was to investigate which endometrial morphological features assessed by gray scale ultrasound and color Doppler vessel were useful for discriminating between benign intracavitary and malignant endometrium pathology. The second aim was to evaluate the best ultrasound method for assessing the myometrial invasion.

Methodology 162 women in pre- and postmenopause were enrolled in a prospective study, with or without abnormal vaginal bleeding. We used IETA Group criteria: endometrial uniformity, echogenicity, regularity of the endometrial-myometrial border, Doppler color score, vascular pattern (single dominant vessel, with or without branching, multiple vessels with focal or multifocal origin, scattered vessels, color splashes, circular flow). The ultrasound diagnosis was compared with histopathological assessment.

Results The mean age of the study population was 56.46 ±10.84 years (range 36–88 years). 22.84% endometrial lesions were malignant. The mean endometrial thickness measured by transvaginal ultrasonography was found to be 18.02 ±10.94 mm (range 5–64 mm) and for women with endometrial cancer was 24.49 ±16.10 mm (95% confidence interval [CI] 14.34 to 35.16). From patients with endometrial cancer: 94.6% had endometrium with hyperechogenic aspect (p=0.006), all of them presented irregular junction (p=0.001), mean color Doppler score was 3±1 (p=0.001), and 54.1% were with scattered vessels (p=0.001). Heterogenous echogenicity had Se=100% (95% CI 0.6756 to 1) and Sp=36.8% (95% CI 0.2706 to 0.5157) for endometrial cancer. Vascularization was not observed in 68.4% of patients with polyps. 80% of cases with submucous myomas demonstrated a circumferential flow pattern. We could correctly appreciate by ultrasound the depth of myometrial invasion.

Conclusion IETA morphological ultrasound criteria and color Doppler blood flow mapping are good tools for establishing the diagnosis of endometrial cancer. Myometrial invasion established by ultrasonography has increased feasibility.

Differential diagnosis of endometrial and endocervical adenocarcinoma: is immunohistochemistry useful?

Diana Mocuta, Monica Baros, Cristina Azu, Obstetrics-Gynecology, County Clinical Emergency Hospital of Oradea, Oradea, Romania; Obstetrics Gynecology, University of Oradea, Oradea, Romania; Morphopathology, County Clinical Emergency Hospital of Oradea, Oradea, Romania; Morphological Disciplines, University of Oradea, Oradea, Romania

Introduction/Background Among the most common problems encountered in gynecological pathology is the distinction of primary endometrial and primary endocervical adenocarcinomas. Accurate diagnosis in this cases is important because this has significant management, staging and prognostic implications. In the distinction between endometrial and endocervical origin for an adenocarcinoma, a panel of immunohistochemical markers should be used, depending on the morphologic subtype and not just the site of origin. The aim of our study was to determine which are the most useful markers used for proper differentiation of endocervical and endometrial adenocarcinomas.

Methodology This retrospective study included 109 cases admitted in the Gynecological Department of Clinical Emergency Hospital Oradea, from January 2019 until December 2021. Fractioned uterine curettage was performed. Following histopathological evaluation, the diagnosis of either endocervical, either endometrial carcinoma was established. Immunostaining for p16, vimentin, p53, CEA, ER and PR was performed in all cases.

Results In the distinction between usual-type endocervical adenocarcinoma and low grade endometrioid-type endometrial adenocarcinoma the most useful markers were p16 and ER, PR. In the distinction between usual-type adenocarcinoma and high grade endometrial adenocarcinoma p53 was of value. Positive rates of CEA and p16 expression in cervical adenocarcinoma were significantly higher than those in adenocarcinoma of endometrium. The expression’s intensity of vimentin, ER and PR was positively correlated with endometrial adenocarcinoma. On the basis of immunohistochemistry, 71 cases (65.13%) should be categorized as endometrial and 38 cases (34.86%) as endocervical adenocarcinomas.

Conclusion The primary site of adenocarcinoma dictates treatment, depending on clinical stage. Generally, endometrial cancer is managed surgically with adjuvant therapy and in endocervical cancer, sometimes radiation therapy alone is used in select cases, or is followed by surgery. Immunohistochemical testing with multiple markers aids in diagnostic evaluation of adenocarcinomas of endocervix and endometrium and is recommended in tumors of uncertain origin.