Adnexa Including Ovaries and Fallopian Tubes

When evaluating the adnexa, an attempt should be made to identify the ovaries first because they can serve as a major point of reference for assessing the presence of adnexal pathology. Ovarian size may be determined by measuring the ovary in 3 dimensions (longitudinal, transverse, and anteroposterior diameters) on views obtained in 2 orthogonal planes[23,24] with calculation of the ovarian volume as necessary. Any ovarian abnormalities should be documented.[25–30]

The ovaries may not be identifiable in some patients. This occurs most frequently before puberty and after menopause when the ovaries are smaller and/or follicles are not consistently present to serve as a landmark. The adnexal region should be surveyed for abnormalities, particularly masses and dilated tubular structures.

If an adnexal abnormality is noted, its relationship with the ovaries and uterus should be assessed. The size and sonographic characteristics of adnexal masses should be documented. The addition of 3-dimensional to 2-dimensional ultrasound can be helpful to differentiate ovarian multiseptated cysts from hydrosalpinges. Additionally, the use of the "slide-by" technique can demonstrate the presence or absence of mobility of the adnexal structures.[31] An abnormal ovarian location, such as in the posterior cul-de-sac with adhesion, particularly to the uterus, pelvic side wall, or contralateral ovary, should be documented, as this may indicate endometriosis, other sources of adhesions, or displacement of the ovary in the setting of ovarian torsion. Documentation should include whether the mass is cystic or solid and, if cystic, simple or complex. A detailed description of complex cysts should be provided, including the presence or absence of septations (thick or thin), solid components, mural nodules, excrescences or papillations, and vascular characteristics if appropriate. If the sonographic characteristics are suggestive of a specific diagnosis, such as a hemorrhagic cyst, an endometrioma, a mature teratoma, hydrosalpinx, or a pedunculated fibroid, this information should also be provided. Spectral, color, and/or power Doppler ultrasound may be useful to evaluate the vascular characteristics of pelvic lesions.[32–35]

Cul-de-Sac

The cul-de-sac and bowel posterior to the uterus may be evaluated for the presence of free fluid, loculated fluid, or a mass. If a mass is detected, its size, position, shape, sonographic characteristics, and relationship with the ovaries and uterus should be documented. Differentiation of normal loops of bowel from a mass may be difficult if only a transabdominal examination is performed. The rectosigmoid colon wall may be imaged from the posterior vaginal fornix.[36] Special attention to the posterior cul-de-sac should be made in women with pelvic pain, fixed retroflexion of the uterus, or sonographic evidence of posterior adenomyosis and in those with known or clinically suspected endometriosis.[12,37] Hypoechoic masses with tapering ends in the rectosigmoid wall may be seen in deeply infiltrating endometriosis.[36,37] The presence of adhesions in the cul-de-sac may be inferred in the absence of a normal uterine sliding sign[36,38] during dynamic imaging.

Documentation

Accurate and complete documentation is essential for high-quality patient care. Written reports and ultrasound images/video clips that contain diagnostic information should be obtained and archived, with recommendations for follow-up studies if clinically applicable, in accordance with the *AIUM Practice Parameter for Documentation of an Ultrasound Examination*.

Equipment Specifications

The ultrasound examination of the female pelvis should be conducted with a real-time scanner, preferably using sector, curved linear, and/or endocavitary transducers. The transducer should be adjusted to operate at the highest frequency appropriate for the clinical circumstance, realizing that there is a trade-off between resolution and beam penetration.

Quality and Safety

Policies and procedures related to quality assurance and improvement, safety, infection control, and equipment performance monitoring should be developed and implemented in accordance with the AIUM Standards and Guidelines for the Accreditation of Ultrasound Practices.