Retrospective study evaluating the role of Transvaginal Ultrasound Guided Biopsy in Gynecological Cancer Patients

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Objectives:To evaluate the adequacy, safety and diagnostic accuracy of transvaginal ultrasound-guided biopsy.

Methods:This is a retrospective study including patients with suspicious pelvic advanced tumors, primary (excluding cervical and vaginal cancer) or recurrent disease, or uncertain lesions who underwent transvaginal ultrasound guided biopsy at the Division of Gynaecologic Oncology, between April 2015 to May 2018. Transvaginal biopsies were performed with a 18-G/25 cm core-cut biopsy needle and finally histology was obtained.

Results A total of 62 women were analyzed. An adequate sample for histological analysis was obtained in all (100%) cases. Three patients (4.8%) complained for pain during the procedure, which was controlled by oral analgesic therapy and lasted for 10 min. No early and late complications were registered. Histopathological examinations showed 24/62 (38.7%) benign lesions (e.g fibrosis, inflammation, uterine or ovarian myoma) and 38/62 (61.3%) malignant tumors, distributed as follows: 34/38 (89.8%) malignant gynecological lesions, and 4/38 (10.2%) non gynecological malignant tumors. Among the malignant lesions, there were 12/38 (31.5%) primary tumor, 24/38 (63.1%) recurrent tumors and 2/38 (5.3%) metastasis from non-genital cancer. Ten patients underwent surgical treatment. Final histology was not in agreement with the results from tru-cut biopsy in 2 of 10 patients (20%); in particular benign disease at tru-cut biopsy resulted positive for malignancy at final histology (2 cases of recurrent cervical cancer).

Conclusions:Transvaginal ultrasound-guided tru-cut biopsy is an efficient, minimally invasive, accurate and safe diagnostic method for the management of pelvic tumors or uncertain lesions, where unnecessary surgery can be avoided in 80% of the cases.

Table 1 Clinical characteristics of 62 patients submitted to ultrasound guided-biopsy and indication of biopsy

Characteristics	n (%) or median (range)
Age at diagnosis (years)	61 (31-89)
Premenopausal	12 (19.3)
BMI*	26.3 (16.4-50.1)
Personal history of cancer	35 (56.4)
Genital malignancy	31 (50)
Non-genital malignancy ^s	4 (6.4)
Indication for biopsy	
Suspicious of recurrence	35 (56.4)
Malignancy could not be excluded [^]	17 (27.4)
Suspicious of primary genital inoperable tumor [§]	9 (14.5)
Suspicious of primary non-genital tumor	1 (1.6)

*Information available for 42 patients. [^]Tumor with uncertain diagnosis at ultrasound or tumor highly suspected to be malignant at ultrasound but with no evidence of disease at clinical examination, or colposcopy or other imaging tools. [§] 3 gastrointestinal cancer, 1 lung cancer. [§]Inoperable tumors included patients with poor performance status not suitable for surgery or with primary suboptimally operable tumors.

Figure 1. Diagram showing the management of patients underwent ultrasound-guided biopsy.