Transvaginal ultrasound guided Tru-Cut biopsies, success rate and complications

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Introduction

Transvaginal ultrasound guided Tru-Cut biopsies are indicated when suspicion of:
- Disseminated ovarian/peritoneal cancer prior to chemotherapy
- Metastasis from other cancers
- Uterine sarcoma for planning of surgery

Objective

To determine rates of success, predictors for success and explore complications

Material & Methods

64 consecutive patients aged 22-90 median 58
From October 2014- January 2018 in a gynecological oncology center
Retrospective analysis of pathology reports and patients charts
Transvaginal biopsies were obtained with a 18 Gauge Tru-Cut needle.
Gold standard was final histology from surgery, except in cases of ovarian cancer, where chemotherapy was initiated after positive histology. Two patients had no gold standard and the biopsies were considered insufficient.

Results

64 patients had a total of 67 biopsies.
In 80 % of the patients (51/64) the biopsies were sufficient for diagnosis.
The failures were not operator or time associated.
In patients with suspicion of ovarian cancer the success rate was 85% (33/39), but in sarcoma the success rate was 64% (9/14) (p=0.0011 (Fisher’s exact test)).
Recurrent biopsies in three patients with primarily insufficient biopsy led only to diagnosis in one.
One patient, 1.6% (1/64) had a pulmonary embolism after the anticoagulant therapy was paused in accordance with National guidelines

Indication for Tru-Cut biopsy

<table>
<thead>
<tr>
<th>Indication</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Peritoneal cancer</td>
<td>6%</td>
</tr>
<tr>
<td>GI Metastasis</td>
<td>8%</td>
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<tr>
<td>Uterine Sarcoma</td>
<td>22%</td>
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<tr>
<td>Ovarian cancer</td>
<td>61%</td>
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<tr>
<td>Others</td>
<td>2%</td>
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</tbody>
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Conclusion

Transvaginal ultrasound guided Tru-Cut biopsies were successful in 80% of patients.
The success rate was related to indication with a significant higher success rate in ovarian cancer 85% compared to 64% in uterine sarcoma.
The complication rate was 1.6%.