A proposed technique to visualize and classify uterosacral ligament deep endometriosis with and without parametrial or torus uterinus infiltration

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INTRO

- The diagnostic test accuracy of TVS for uterosacral ligament (USL) deep endometriosis (DE) is not very good with sensitivity/specificity of 67%/86%.
- We question whether this might be related to the absence of a standardized technique for its assessment.
- We present a method that allows easier identification of normal and abnormal USLs and classification of USL-DE nodules

Technique (Video 1):
1. Insert the TVS probe in posterior vaginal fornix behind the cervix and uterus.
2. Decrease penetration depth of field. Position focal point nearest to probe.
3. Angle probe toward the rectum in mid-sagittal position. Visualize the hypoechoic vagina, nearest to the probe; next is the hyperechoic pouch of Douglas (POD) peritoneum. Follow this hyperechoic line closely in the next step.
4. Right USL: simultaneously sweep the ultrasound beam to the patient right and rotate clockwise (usually not more than 45°); the hyperechoic line (peritoneum) should begin to thicken. The USL should be evaluated when the hyperechoic line is thickest. For the left USL: similar procedure, but rotating counter-clockwise.
5. If a hypoechoic lesion within the hyperechoic USL is seen (Figures 1), measure in three orthogonal planes.
6. Evaluate the proportion of the nodule that is within the borders of the USL and characterize the lesion as per the proposed USL-DE classification system (Table 1; Figures 2 & 3), in line with the leiomyoma subclassification of submucosal leiomyomas.
7. Evaluation of the ureters should always be performed. A ureter diameter ≥6mm should be considered as dilated. Kidneys should be assessed for hydronephrosis.

Table 1 - USL-DE Classification System

<table>
<thead>
<tr>
<th>Type</th>
<th>USL-parametrium</th>
<th>USL-torus uterinus</th>
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<tbody>
<tr>
<td>Type 0</td>
<td>DE nodule is confined to the USL; no infiltration into parametrium or torus uterinus.</td>
<td></td>
</tr>
<tr>
<td>Type 1P</td>
<td>DE nodule partially infiltrating parametrium; &gt;50% of DE nodule within USL.</td>
<td>DE nodule partially infiltrating torus uterinus; &gt;50% of DE nodule within USL.</td>
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<tr>
<td>Type 1T</td>
<td>DE nodule significantly infiltrating parametrium; &lt;50% of DE nodule within USL.</td>
<td>DE nodule significantly infiltrating torus uterinus; &lt;50% of DE nodule within USL.</td>
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