

## **Differential diagnosis of posterior compartment prolapse using transperineal ultrasound**

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This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process which may lead to differences between this version and the [Version of Record](#). Please cite this article as doi: [10.1002/uog.24814](https://doi.org/10.1002/uog.24814)

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## INTRODUCTION

Pelvic organ prolapse (POP) of the posterior compartment encompass various conditions that may have similar clinical presentation, like an obstructed defecation or a bulge in the vagina. However, management of posterior compartment POP requires an accurate diagnosis of the pathology causing the prolapse, to provide the correct treatment. Currently, transperineal ultrasound defines the “significant descent of the posterior compartment” as the downwards displacement of the rectal ampulla  $\geq 15$  mm below the pubic symphysis<sup>1</sup>. Nonetheless, besides diagnosing the posterior compartment POP, ultrasound can also allow us to make a differential diagnosis of pathologies that may affect the posterior compartment: rectocele, combined recto-enterocele, enterocele or rectal intussusception<sup>2</sup>. The main objective of this article is to illustrate the differential diagnosis of the various conditions that may cause posterior compartment POP, exclusively based in the image obtained by transperineal ultrasound.

Figure 1 shows the different patterns of the posterior compartment pathologies. Rectocele can be seen in the transperineal ultrasound image as a herniation of the anterior rectal wall into the vagina (Figure 1B). In the case of a rectoenterocele, there is herniation of both a rectocele together with the small bowel or other abdominal content towards the vagina. (Figure 1C). Enterocele is shown as a protrusion of the abdominal content anterior to the anorectal angle, separating the vagina from the rectal ampulla (Figure 1D). Rectal intussusception can be seen as an invagination of the anterior rectal wall in the anal canal at the level of the anorectal canal angulation (Figure 1E).

## DISCUSSION

It has been established that transperineal ultrasound has a good correlation with the POP-Q quantification system for the diagnosis of POP, with a concordance of 61,5%<sup>3</sup>. Moreover, it has proven to be useful in the differential diagnosis of the posterior compartment POP<sup>4</sup>, which evinces the importance to establish the different ultrasound patterns that differentiate the pathologies that cause the prolapse of said compartment.

Although the clinical diagnosis of these conditions related to posterior compartment POP can often be difficult, studies using transperineal ultrasound have shown that rectocele is present in 53% of cases, while enterocele and rectal intussusception represent 14% and

4.3%<sup>2</sup> of cases, respectively. In fact, transperineal ultrasound is a simple, inexpensive, and well tolerated alternative to the assessment of defecation disorders and posterior compartment POP<sup>5</sup>. All of this emphasizes the importance of studying the different ultrasound patterns of the anorectal canal in the differential diagnosis of the posterior compartment POP.

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## LEGENDS

Figure 1: Shows the different patterns of the pathologies causing posterior compartment POP, during maximum Valsalva. A: Normal. B: Rectocele. C: combined recto-enterocele. D: isolated enterocele. E: rectal intussusception. P: pubic bone, Bl: bladder, V: vagina, U: uterus, R: rectal ampulla, Ac: anal canal, L: levator ani muscle, Re: rectocele, En: enterocele, RI: rectal intussusception.

