

Early postoperative visualization of colorectal anastomosis using transvaginal ultrasound: a prospective feasibility study

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Introduction

Anastomotic leak after rectosigmoid resection is a serious postoperative complication associated with significant morbidity. Early detection remains challenging, as clinical symptoms may appear late. We aimed to evaluate the feasibility of transvaginal ultrasound (TVUS), including a saline contrast test, for early postoperative visualization of colorectal anastomosis.

Methods

This is an ongoing prospective single-centre feasibility study including women undergoing rectosigmoid resection with low colorectal anastomosis. Patients undergo standardized TVUS on postoperative days 4–6 performed by trained examiners. The examination focuses on identification of the anastomotic site, assessment of bowel wall integrity, visualization of the staple line or anastomotic ring and detection of peri-anastomotic fluid or gas. Image quality is graded using a predefined three-level scale (excellent, good, and limited). In cases suspicious for anastomotic insufficiency, a transanal Foley catheter is used to administer sterile saline to evaluate potential contrast leakage under ultrasound visualization. The planned sample size is 40 patients.

Results

The study is currently ongoing and recruitment has recently started. Seven patients have been enrolled so far. In all cases, the colorectal anastomosis was successfully visualized using TVUS with good or excellent image quality. No procedure-related complications were observed. Recruitment is ongoing.

Conclusion

Early postoperative TVUS appears to be a feasible and safe method for visualization of low colorectal anastomosis after rectosigmoid resection. The addition of a saline contrast test may further improve the ability to identify early anastomotic complications. Further recruitment will allow evaluation of the diagnostic performance of this technique.

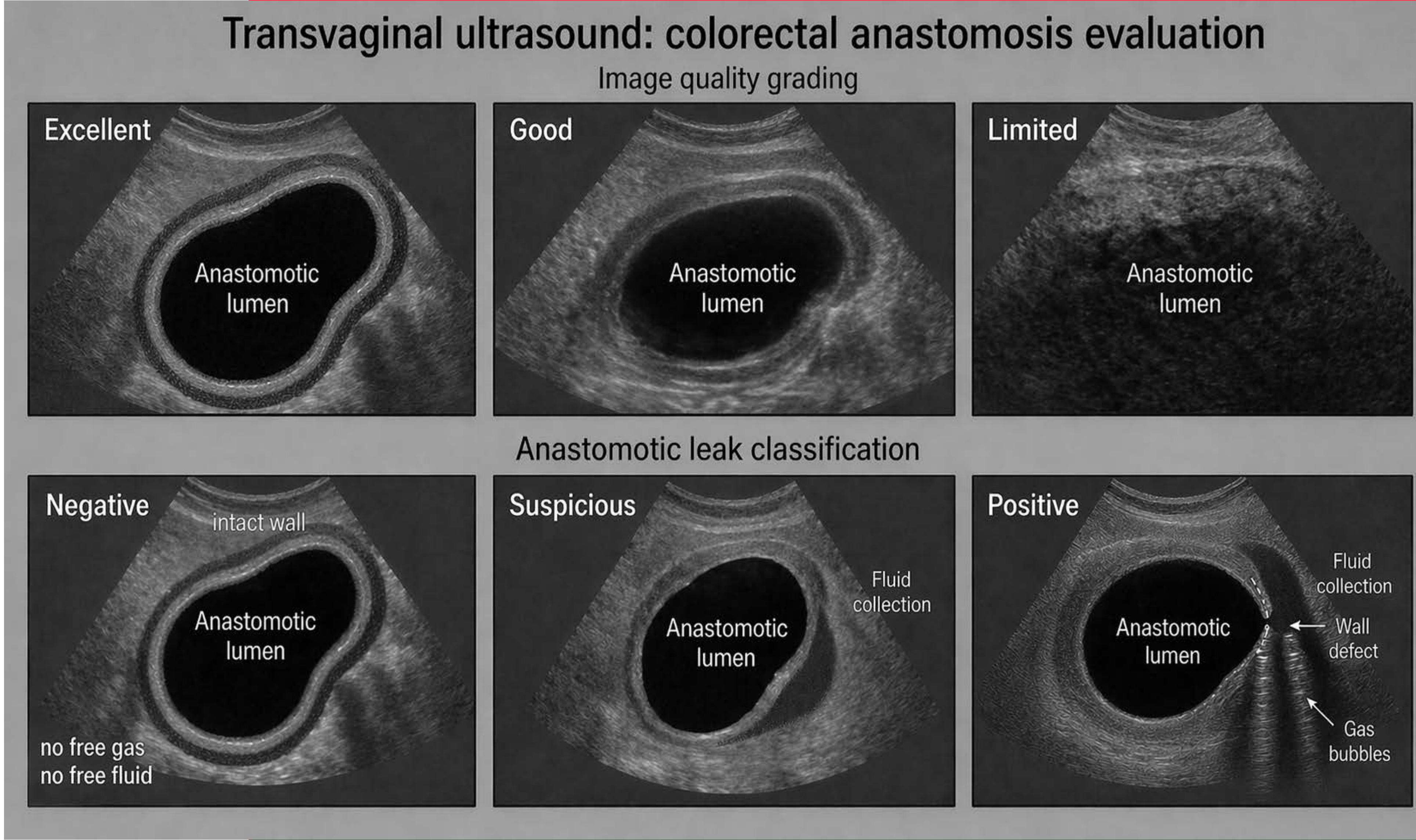


Fig.1: Transvaginal ultrasound: colorectal anastomosis evaluation.

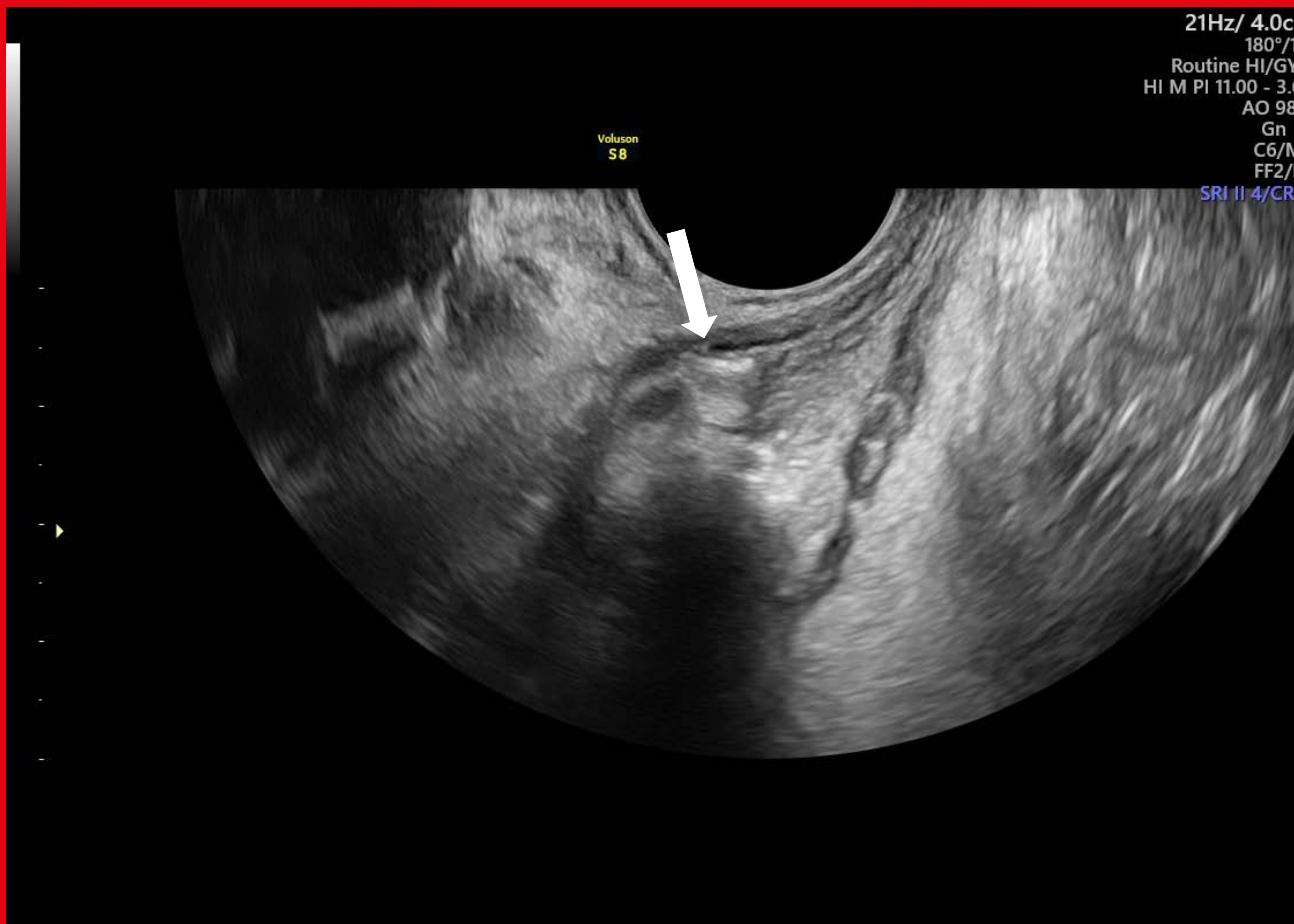


Fig.2: Transvaginal ultrasound of the colorectal anastomosis showing the hyperechoic anastomotic line (white arrow) with posterior acoustic shadowing.