

## IBD

### **The value of endorectal ultrasound (ERUS) in the assessment of the clinical severity of ulcerative colitis**

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**AIM:** Endorectal ultrasonography (ERUS) represents a relatively new diagnostic tool enabling easy and precise assessment of rectal wall lesions, used mostly in diagnosing of the carcinoma of the rectum. It seems to be a valuable examination in the evaluation of the severity of ulcerative colitis. **Methods:** 56 patients (23 F, 33 M; mean age 51.4, range 17-72) with histopathologically confirmed ulcerative colitis, operated at 1st Department of General and GI Surgery in Cracow, were enrolled to the study. In all patients endorectal ultrasonography was performed to assess the severity of the disease. The diagnostic accuracy, sensitivity and specificity, PPV and NPV of ERUS were analyzed basing on intraoperative surgical assessment and postoperative histopathological examination. **RESULTS:** The sensitivity of ERUS reached 85.7 per cent, specificity was high - 97.3 per cent PPV - 88.9 per cent, NPV - 92.4 per cent and overall accuracy 95 per cent. **CONCLUSIONS:** The assessment of the severity of ulcerative colitis using endorectal ultrasonography corresponds with clinical severity of the disease. ERUS is a valuable, relatively cost-effective diagnostic tool of high overall accuracy, which may be helpful in clinical evaluation and monitoring of ulcerative colitis.

### **Transperineal ultrasound in the detection of perianal and rectovaginal fistulae in Crohn's disease.**

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**OBJECTIVES:** Perianal and rectovaginal fistulae are common complications in Crohn's disease. Magnetic resonance imaging (MRI) and endoanal ultrasound are used for imaging perianal fistulae and abscesses, but both methods require expensive equipment and experienced investigators. Transperineal ultrasound may represent another method of detecting perianal complications in Crohn's disease. We investigated Crohn's disease perianal and rectovaginal fistulae using transperineal ultrasound and compared the findings with results of endoanal ultrasound as reference standard. **METHODS:** A total of 46 patients with Crohn's disease and perianal and/or rectovaginal or anovulvar fistulae underwent, transperineal and endoanal ultrasound, on the same day. Transperineal ultrasound was performed using regular convex and high-resolution linear probes. Endoanal ultrasound was performed using an ultrasound system with a 7 MHz rotating endoanal probe. Fistulae were classified according to Parks' classification in intrasphincteric, transsphincteric, suprasphincteric, and extrasphincteric. Rectovaginal or anovulvar fistulae were described separately. Presence of abscesses was also reported. **RESULTS:** Fifty-two fistulae (3 intra-sphincteric, 28 transsphincteric, 8 suprasphincteric, 2 extrasphincteric, 9 rectovaginal, and 2 anovulvar) were detected by transperineal ultrasound. Endoanal ultrasound confirmed the correct classification of 45 fistulae (predictive positive value: 86.5%). Of the 53 fistulae detected by endoanal ultrasound, 45 were correctly classified by transperineal ultrasound (sensitivity 84.9%). Transperineal ultrasound showed 10 perianal abscesses: 2 horseshoe, 4 deep, and 4 superficial. Endoanal ultrasound confirmed all horseshoe, 3 deep, and 2 superficial abscesses and did not find further abscesses. **CONCLUSIONS:** Transperineal ultrasound is a simple, painless, real-time method to detect and classify perianal and rectovaginal fistulae and/or abscesses in Crohn's disease.

## ENDOMETRIOSIS – OBSTETRIC LESION

### **Endorectal ultrasound accuracy in the diagnosis of rectal endometriosis infiltration depth.**

Fertil Steril. 2007 Nov 17

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**OBJECTIVE:** To evaluate the accuracy of endorectal ultrasound examination to ascertain the deepest rectal layer involved in rectal endometriosis. **DESIGN:** Retrospective study. **SETTING:** Department of obstetrics and gynecology at a university hospital in France. **PATIENT(S):** Women presenting with rectal endometriosis who had undergone rectal resection during a 22-month period. **INTERVENTION(S):** Endorectal ultrasonography. **MAIN OUTCOME MEASURE(S):** The predicted rectal infiltration depth by using endorectal examination was compared with histological findings. The level of agreement was evaluated by using the coefficients of concordance kappa and weighted kappa. **RESULT(S):** Sixteen women were included in the study. Rectal resection was segmental in 14 cases and was limited in 2 cases. The agreement between 2 examinations was considered good in 9 cases (56%). Endorectal ultrasound overestimated the depth of infiltration in 5 cases and underestimated it in 2 cases. The coefficients of concordance kappa (95% confidence interval) and weighted kappa (95% confidence interval) were, respectively, 0.17 (0-0.34) and 0.22 (0.04-0.4), corresponding to poor concordance between the endorectal ultrasonography and histological examination. **CONCLUSION(S):** Accuracy in the prediction of rectal-layer involvement in endorectal ultrasonography appears to be limited. This information should not be considered sufficient when selecting the type of rectal-resection procedure.

### **Long-term anal continence and quality of life following postpartum anal sphincter injury.**

Colorectal Dis. 2008 Feb 9]

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**Objective** Anal incontinence occurs as a result of damage to pelvic floor and the anal sphincter. In women, vaginal delivery has been recognized as the primary cause. To date, figures quoted for overt third degree anal sphincter tear vary between 0% and 26.9% of all vaginal deliveries and the prevalence of anal incontinence following primary repair vary between 15% and 61%. Our aim was to analyse the long-term (minimum 10 years post primary repair) anorectal function and quality of life in a cohort of women who suffered a third degree tear (Group 1) and compare the results with a cohort of women who underwent an uncomplicated vaginal delivery (Group 2) or an elective caesarean delivery (Group 3). **Method** In all, 107 patients who suffered a third degree tear between 1981 and 1993 were contacted with a validated questionnaire. The two control groups comprised of 125 patients in each category. Those who responded to the questionnaire were invited for anorectal physiology studies and endoanal ultrasound. **Results** Of the total number contacted, 54, 71 and 54 women from the three groups returned the completed questionnaire. In the three groups, a total of 28 (53%), 13 (19%) and six (11%) complained of anal incontinence ( $P < 0.0001$ ) respectively. Comparison of quality of life scores between the groups showed a poorer quality of life in those who suffered a tear ( $P < 0.0001$ ). In addition, in spite of primary repair, 13 (59%) patients in group 1 showed a persistent sphincter defect compared to one (4%) occult defect in Group 2 and none in Group 3. **Conclusion** Our study indicates that long-term results of primary repair are not encouraging. It therefore emphasizes the importance of primary prevention and preventing further sphincter damage in those who have already suffered an injury (during subsequent deliveries).

### **Internal anal sphincter defect influences continence outcome following obstetric anal sphincter injury.**

Am J Obstet Gynecol. 2007 Mar;196(3):217.e1-5.

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**OBJECTIVE:** To date, little correlation has been found between the extent of anal sphincter injury defined by endoanal ultrasound and symptoms of postpartum fecal incontinence. To define this relationship, we assessed a large cohort of women following first recognized obstetric anal sphincter injury. **STUDY DESIGN:** In all, 500 consecutive women were studied at 3 months following primary repair of a first recognized obstetric anal sphincter injury sustained during vaginal delivery. Assessment included a standardized fecal incontinence questionnaire (modified Jorge-Wexner score), anal manometry, and endoanal ultrasound. Severe fecal incontinence was defined by a score greater than 9. Statistical significance of the relationship between symptoms and factors including age, parity, mode of delivery, and extent of sphincter injury (defined by endoanal ultrasound), was analyzed through multiple logistic regression. **RESULTS:** Increasing age ( $P = .006$ ) and parity ( $P = .039$ ), instrumental delivery ( $P < .001$ ), an anal canal resting pressure of  $< \text{or} = 35 \text{ mm Hg}$  ( $P = .047$ ), and internal anal sphincter (IAS) injury ( $P = .002$ ) were significantly related to the presence of fecal incontinence. With multivariate analysis, and adjusting for other factors, instrumental delivery (OR 3.1;

95% CI 1.2-7.9) and IAS defect thickness (partial thickness defect > 1 quadrant or full thickness defect; OR 5.1 95% CI 1.5-22.9) were predictive of severe incontinence, but external anal sphincter defects were not. CONCLUSION: Endosonographic evidence of IAS injury is predictive of fecal incontinence following obstetric anal sphincter injury. The presence of an IAS defect should be sought carefully if the anal sphincter is injured during vaginal delivery.

**Risk factors for sonographic internal anal sphincter gaps 6-12 months after delivery complicated by anal sphincter tear.**

Am J Obstet Gynecol. 2007 Sep;197(3):310.e1-5.

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OBJECTIVE: The objective of the study was to identify risk factors for internal anal sphincter (IAS) gaps on postpartum endoanal ultrasound in women with obstetric anal sphincter tear. STUDY DESIGN: This prospective study included 106 women from the Childbirth and Pelvic Symptoms Imaging Supplementary Study who had third- or fourth-degree perineal laceration at delivery and endoanal ultrasound 6-12 months postpartum. Data were analyzed using Fisher's exact and t tests and logistic regression. RESULTS: Mean (+/- SD) age was 27.7 (+/- 6.2) years. Seventy-nine women (76%) were white and 22 (21%) black. Thirty-seven (35%) had sonographic IAS gaps. Risk factors for gaps included fourth- vs third-degree perineal laceration (odds ratio [OR] 15.4, 95% confidence interval [CI] 4.8, 50) and episiotomy (OR 3.3, 95% CI 1.2, 9.1). Black race (OR 0.23, 95% CI 0.05, 0.96) was protective. CONCLUSION: In women with obstetric anal sphincter repairs, fourth-degree tears and episiotomy are associated with more frequent sonographic IAS gaps.

**Occult perineal endometrioma diagnosed by endoanal ultrasound and treated by excision: a report of 3 cases.**

J Reprod Med. 2007 Aug;52(8):733-6.

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BACKGROUND: Isolated perineal endometrioma is a rare entity and often causes diagnostic uncertainty. CASES: Three premenopausal women, none with a prior history of endometriosis, presented with vague perineal pain 3-6 months following obstetric delivery with episiotomy. The latency periods between the onset of symptoms and definitive diagnosis were 3 months, 18 months and 3 years despite multiple physician evaluations in the interim. Patient presentation and management were virtually identical in all cases. Detailed questioning revealed that the pain was located adjacent to the episiotomy incision and waxed and waned with menses. Physical examination revealed a vague fullness adjacent to the episiotomy incision. Endoanal ultrasound revealed a mass of mixed echogenicity adjacent to the external anal sphincter. Transperineal exploration revealed a tumor with the gross appearance of an endometrioma, which was confirmed histologically. Excision of the mass with preservation of the anal sphincter muscle resulted in resolution of symptoms in all patients without the need for hormonal manipulation. No patient suffered diminution of fecal continence. CONCLUSION: Occult perineal endometriosis should be considered when a woman presents with cyclic pain in the perineum following delivery and episiotomy. Endoanal ultrasound can assist with the diagnosis. Transperineal excision with sparing of the anal sphincter can be curative, without compromising continence.