

The elephant's other bits

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Published online: 29 September 2009
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In this issue of the journal Dr. Murad-Regadas et al. present a retrospective analysis of 255 women who had undergone defecography for constipation according to the Rome Criteria [1]. This is a very interesting paper that tackles a subject with substantial implications for the aetiology of conditions that we know rather little about. There is no doubt that research into the potential aetiological contribution of childbirth should have a high priority, since there is such widespread disagreement regarding the definitions of rectocele and rectal intussusception, and since we are far from achieving consensus on treatment.

In short, Murad-Regadas found that neither rectocele nor anismus nor rectal intussusception were associated with vaginal parity. These findings are in disagreement with some of our own data, and I wonder whether this may be an artefact of study design, and maybe also an artefact of the imaging methodology used in this study, resulting in reduced power and type II errors.

To start with, it is usually advantageous to define hypotheses to be tested, such as “Mode of delivery is associated with defecography findings” (which would require a comparison of vaginally parous women against C/S) or “Parity is associated with defecography findings” (which requires a comparison of nulliparae vs. parous women). Another issue is the role of confounders, such as age. Nulliparae were substantially younger, and rectocele is

clearly associated with age. A multivariate analysis may have been useful. And I do not quite understand the numbers trail. It seems not one patient had had both C/S and vaginal deliveries, which is, after all, quite common.

Another issue is definitions. Rectal intussusception is a particularly interesting condition that is the subject of a just-completed study at my unit. One of the problems in assessing the literature on the subject is the definition of intussusception actually is. In agreement with Anders Mellgren, a colorectal surgeon with a long-standing interest in the twilight zone between Gynaecology and Coloproctology, I would suggest that rectal intussusception is an invagination of the rectal ampulla, propelled by a ‘peritoneocele’ containing small bowel, sigmoid, or, rarely, the uterine cervix, omentum or just fluid [2]. Mucosal infolding (which is often misdiagnosed as intussusception) seems to be a very different condition and probably of limited consequence.

One of the main effects of modern pelvic floor imaging is that it has the potential to make colorectal surgeons, urologists and gynaecologists talk to each other as never before, and even more important, to make us understand each other. This invited commentary is plain evidence of this trend, and I for one am excited by the potential for collaboration. So far, we have all viewed the pelvic floor from very different perspectives, the urologist, as it were, from the perspective of the cystoscopist, the gynaecologist through a vaginal speculum, and the colorectal surgeon/gastroenterologist through the sigmoidoscope. Not surprisingly, we all ended up identifying different parts of the proverbial elephant in the dark. It's time for all of us to acknowledge that other specialties and subspecialties may have an important contribution to make to the overall picture, so that we may ultimately end up perceiving the elephant in its true form and function.

This comment refers to the article doi:[10.1007/s10151-009-0533-z](https://doi.org/10.1007/s10151-009-0533-z).

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This requires awareness of the literature produced by colleagues in other specialties, and I'm afraid that awareness is lacking in the Murad-Regadas paper. There are a number of gynaecological publications on the effect of delivery on the pelvic floor, and it is probably not a bad idea to check the gynaecological literature if one wants to consider the effect of childbirth on rectocele [3, 4] or on the puborectalis muscle [5–7]. Translabial ultrasound is a much cheaper and simpler technique than defecography. As a result, it can be used for research into the effects of childbirth since patients are quite likely to come back for a second test postpartum. The technique is certainly becoming useful in the assessment of obstructed defecation [8–12]. It was developed by gynaecologists [13, 14] who were the first to employ it for the assessment of rectocele [15, 16], but colorectal colleagues have independently developed a similar methodology [10, 12]. Anal sphincter assessment is an excellent example of a field where a true multidisciplinary approach is taking hold, and hopefully we can do the same for the field of vaginal/rectal prolapse and pelvic floor dysfunction.

Having made my plea for a dialogue between gynaecologists and colorectal surgeons/gastroenterologists interested in pelvic floor and anorectal function, I should quickly comment on the issue of childbirth and its impact on the anatomy and function of the rectal ampulla and anal canal. I will except the anal sphincter muscle since there are many (both gynaecologists and colorectal colleagues) who are more knowledgeable in this field than myself.

As regards rectocele, it seems that about 10% of young Caucasian women show evidence of a small rectocele (i.e. a defect of the rectovaginal septum with herniation of the anterior wall of the rectal ampulla into the vagina) prior to their first pregnancy [3], but there seems to be an increase in visible defects and in the size of pre-existing defects after childbirth [4]. In later life, other etiological factors seem to superimpose themselves on congenital and traumatic causes. The foremost amongst them seem to be body mass index [17] and, probably, diet and stool quality. This may be similar to the situation as regards anal sphincter tears. In a 40 year old, a sphincter tear is likely to matter for anal continence, but in an 85 year old with dementia such trauma is probably quite irrelevant.

As regards rectal intussusception, the perspective of the urogynaecologist is necessarily different from the viewpoint of the radiologist or coloproctologist. In my tertiary urogynecology clinic rectocele is very common at about 40% [18], but intussusception (as defined above) is not, at about 40/1,000. It seems that what we call intussusception (invagination of the anterior rectal wall into the anal canal) is associated with a wide hiatus and probably avulsion (one of the main causes of a widened hiatus), and of course with vaginal childbirth (unpublished own data). I suspect that

rectal intussusception frequently is evidence of substantial pelvic floor trauma, just like cystocele and uterine prolapse [19, 20].

To sum up, it is highly likely that childbirth and in particular vaginal delivery are factors in the pathogenesis of both rectocele and rectal intussusception. However, both conditions do occur in vaginally nulliparous women, and multiple other factors such as BMI, chronic constipation and age may over time tend to obscure the aetiological contribution of childbirth. In a 35 year old with severe ballooning of the levator hiatus after a bilateral avulsion injury due to a traumatic forceps delivery, an intussusception is very likely related to the damage her pelvic floor suffered in childbirth, but in a 75 year old her chronic slow transit constipation and obesity may be much more significant. Either way, these are subjects that both gynaecologists and coloproctologists ought to be interested in. Modern imaging is going to help us to (finally) understand each other. Even more importantly, it will help us understand the conditions our patients are suffering from and enable us to treat them more effectively.

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