



## Anal fistula, there is more than meets the eye!

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In this issue, Garcia-Botello et al. [1] assess the validity of Goodsall's rule and the Midline rule to predict the path of cryptoglandular perianal fistula and the location of the internal opening using three-dimensional endoanal ultrasound (3D-EAUS). They report on an impressive series of 909 patients with cryptoglandular fistula over a period of 15 years, by far the largest series to date on this topic. Overall positive predictive value (PPV) of Goodsall's rule and Midline rule in their series are, respectively, 73.1% and 62.3%. For fistula in the posterior plane, both rules seem to be highly predictive (81.7% PPV). But more importantly, the authors identified a group of patients where both rules fail to predict the location of the internal opening accurately. This is the case in anterior fistula, in female patients, when the external opening is located further away from the anal verge or when the external opening is in the transverse midline. Taking their results into account, the authors rightfully criticize the use of the Midline rule proposed by others [2]. Furthermore, they question the use of Goodsall's rule in many surgical textbooks and its use to teach medical students and surgical residents, as other authors have done rightfully before them [2]. We believe the time has come to encourage abandonment of this rule.

A good clinical examination is essential in the evaluation of patients with cryptoglandular anal fistula when they present to a coloproctology clinic. Simple inspection will identify the number and position of external openings, scarring from previous fistula surgery/episiotomy, keyhole deformities or the presence of undrained subcutaneous abscesses. The direction and size of some parts of rigid fistula tracks may be palpated and digital rectal examination may identify the position of an internal opening. Some surgeons claim

to be able to determine the height of the fistula track and relation to the sphincter complex, solely based on clinical examination.

The matter remains whether or not a thorough clinical examination provides surgeons sufficient information to offer their patients an informed decision process regarding required treatment, expected healing rate, number of procedures required or need for seton insertion? Nowadays, in an era where patient consent and quality of life dictate our surgical practice, our patients have the right to know what they sign up for.

When treating *simple fistula* with fistulotomy, the rate of post-operative fecal incontinence is related to the amount of sphincter muscle that is divided [3]. Or maybe more importantly, the amount of sphincter muscle that is left undivided. When properly selected, simple fistula can therefore be easily, safely and effectively treated by fistulotomy [4]. Previous studies [5, 6] have shown a correlation between the complexity of the fistula and the distance of the external opening to the anal verge. The present study confirms these findings [1]. Even though these data can be of aid to identify patients who are amenable for fistulotomy, the amount of sphincter muscle divided with fistulotomy can only be roughly estimated. This may lead to unexpectedly high incontinence rates [7]. In other words, based on clinical examination alone, we cannot inform our patients correctly about the risk of post-operative fecal incontinence.

A recent survey [8] of Dutch surgeons found that 78% uses preoperative imaging (MRI) in primary *complex fistula*. In another international survey [9] only 49% of responding surgeons use MRI and 35% use EAUS for the preoperative evaluation in primary complex fistula. As MRI is readily available and cheap in the Netherlands, this number should be considered as low. Even high-volume tertiary surgeons with decades of experience cannot accurately predict the course of all fistula tracks during examination under anaesthesia (EUA) [10]. Treatment of complex anal fistula requires a full understanding of the course of the fistula track. This entails an accurate identification of the position of the internal opening but also an understanding of what

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goes on between the internal and external opening: side branches, undrained fluid collections, horseshoe extension and the true relation of those to the sphincter complex. No rule will provide surgeons with this information.

In conclusion, the message should be that Garcia-Botello et al. have provided us with solid evidence showing the weakness of using rules in the preoperative evaluation in anal fistula surgery. Clinical examination in office and even EUA are not sufficient to properly consent our patients for the treatment they will undergo. Our patients want to know if they will wake up with a seton or if their sphincter will be divided. Performing EUA as a diagnostic procedure is, to our opinion, no longer justifiable. Future research will have to teach us in which patients preoperative imaging can be omitted. Until then, we have better tools than the naked eye: 3D-EAUS (provided sufficient experience) and MRI (provided correctly used). Because in anal fistula surgery, there is more than meets the eye.

## Declarations

**Conflict of interest** The authors declare that they have no conflict of interest.

**Ethical approval and Informed consent** Ethical approval or Informed consent are not necessary for this type of paper.

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