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Importance of physical examination and imaging techniques in the diagnosis of anorectal fistulae

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A B S T R A C T

Aim: The study was designed to determine the role of clinical examination and imaging techniques in the diagnosis of anorectal fistula.

Material and methods: We performed an observational study with prospective recruiting using the data of 120 patients, by means of clinical evaluation by an experienced coloproctologist surgeon (EE), a surgeon without special training in coloproctology (CE), and examination under anaesthesia (SE), endoanal ultrasound (EAU), and magnetic resonance (MR), using the surgical findings as a reference.

Results: SE was significantly better than EE or CE for detecting an internal opening (IO), primary track, and abscess cavities (AC). EAU was significantly more sensitive and accurate than the EE in identifying an IO, and AC, but not compared to the SE. MR was more sensitive than the EE in the identification of the IO, transphincter and suprasphincter tracks and AC with no significant differences compared to EAU, and more sensitive than the SE to detect AC.

Conclusions: Examination under anaesthesia still has a place in the evaluation of anorectal fistula. Imaging methods are an occasional complement to a clinical evaluation that can help the less experienced to decide the appropriate treatment, particularly when a complex fistula is suspected.

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Importancia de la exploración física y técnicas de imagen en la valoración diagnóstica de las fístulas de ano

R E S U M E N

Objetivos: Se diseña un estudio para valorar el papel de exploración clínica y métodos de imagen en el diagnóstico de la fístula de ano.

Palabras clave:

Fístula de ano

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Exploración clínica
 Ultrasonografía endoanal
 Resonancia magnética

Material y métodos: Efectuamos un estudio observacional con recogida prospectiva de datos en 120 pacientes, mediante evaluación clínica por un explorador experimentado (EE), un cirujano sin especial dedicación a la coloproctología (EC) y una exploración con anestesia (EQ), ultrasonografía endoanal (UEA) y resonancia magnética (RM), usando como referencia los hallazgos durante la cirugía.

Resultados: La EQ fue significativamente mejor que la del EE o EC para detección de orificio interno (OFI), trayecto primario y cavidades abscesuales (CA). La UEA fue significativamente más sensible y exacta que el EE para identificar OFI y CA, pero no respecto a la EQ. La RM fue más sensible que el EE en la identificación de OFI, trayectos transesfinterianos, supraesfinterianos y CA sin diferencias significativas con la UEA, y más sensible que la EQ para detectar CA.

Conclusiones: La exploración bajo anestesia sigue teniendo un importante lugar en la evaluación de pacientes con fístula de ano. Los métodos de imagen son complemento ocasional de una valoración clínica que puede ayudar a los menos experimentados a decidir el tratamiento apropiado y fundamentalmente cuando se sospecha de una fístula compleja.

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Introduction

The aim of surgical treatment of anal fistulae is the permanent eradication of the suppurative process without compromising anal continence. There is a more or less percentage of relapse depending on their complexity, frequently due to not treating undetected infected areas. Physical examination has been the traditional method of preoperative evaluation, though in the last few years there have been important technological advances which could improve this.^{1,2} This could entail an increased sanitary cost, which may often not have a balanced appraisal of the benefits of these examinations. Therefore, its real contribution should be established.

The main aim of this study is to define the role of clinical examination—performed by an experienced examiner—and of endoanal ultrasound in the preoperative information of anal fistula anatomy. The secondary aims are to analyse the worth of the clinical examination by a non-specialised surgeon, of magnetic resonance imaging and endoanal ultrasound under anaesthesia.

Patients and methods

An observational study was performed with prospective data collection of 120 patients (93 males and 27 females), with a standard age mean (deviation) of 46.9 (12.8) years, in the Coloproctology Services of the Hospitales de Sagunto and the Hospital Clínico Universitario de Valencia from 1998 to 2000. They were subsequently operated on with the diagnosis of cryptoglandular origin anal fistula. Therefore, those secondary to other diseases were excluded as well as primary fistulotomy after draining an abscess.

An experienced explorer (EE) from a team of 5 surgeons with special coloproctological accreditation (European Board, EBSQ-C), undertook systematic consultation examinations and in 51 (42.5%) cases, it was carried out by surgeons without special training in coloproctology examination (CE). In addition,

they were examined in the operating theatre (OTE) under anaesthesia by the surgeon responsible for the intervention which, as in the CE, did not coincide with the preoperative examinations. The fistulae were registered according to the Parks classification³ in all of the examinations performed. A preoperative endoanal ultrasound (EAU) was carried out on all the patients, using a Leopard model B&K Medical® ultrasound (Gentofte, Denmark) with a multifrequency 360° rotary transducer (model 1850), infusing hydrogen peroxide (H₂O₂) diluted at 30° through the external fistula opening (EFO). Analysis of the identification or not of an internal fistula opening (IFO), according to the Seow-Choen et al⁴ and Cho⁵ criteria, abscess cavities, primary, and supplementary pathways as well as sphincter integrity. Furthermore, in 23 (19.2%) non-selected patients, another EAU was performed under anaesthesia by the surgeon in charge. Finally, a specially trained radiologist in anorectal and anal fistulae anatomy performed a magnetic resonance (MR) on 20 (16.7%) non-selected patients, with an MR 1.5 device (Horizon LX, GEMS®, Milwaukee, United States), using a torso phased array coil and then endocavitary; fast sequences in high resolution T2 (fast spin-echo FSE, HASTE T2 and STIR) were obtained in the ERESA facility (Valencia). The surgical findings were used as a reference for the assessment of the different studies. Surgeons with special dedication and accreditation in coloproctology (European Board, EBSQ-C) performed the interventions on all the fistulae.

The data was collected in a prospective protocol; the SPSS® version 7 for Windows (SPSS Inc., Chicago, United States) statistical package was used to analyse the results. The χ^2 and Fisher's exact tests were used. A value of $P < .05$ was considered statistically significant.

Results

Forty-three (37.7%) of the 120 anal fistulae studied were relapses, 23 of which were referred to other centres.

Outpatient examination

The EE identified IFO in 117 (97.5%) cases, located at an average of 3 cm (2-4) from the anal margin. Subcutaneous pathway palpated in 84 (70%), with no differences with the CE. Furthermore, 60 IFO were identified via rectal exam. In 52 (43.7%) cases, a malleable stylus was used and in 33 (27.5%), diluted H₂O₂. In general, the CE did not perform a worse assessment than the EE as far as localisation of the IFO, fistula classification or detection of abscess cavities was concerned. Localisation with H₂O₂ obtained a precise diagnosis greater than the exam with stylus (72% vs 57%), with no significant differences. The IFO was situated in the posterior mid line in 45 (65.6%) cases, followed by the anterior in 16 (26.2%). Goodsall's rule was met in 45.8%, but if the IFO was posterior, the rule was met in 84.6% of the cases, versus 33.3% when it was situated in the anterior hemiano. The CE assessed the inter-sphincteral fistulae significantly worse (Table 1). In 22 (18.3%) cases there was a hardening indicative of chronic abscess cavity of which 16 were found during surgery, with an accuracy of 62.5%; the CE was less sensitive in these cases ($P<.001$).

Operating theatre examination

EFO was detected in 117 (97.5%) cases and the palpation identified a fibrous pathway in 96 (80%). Furthermore, 91 IFO

were found, in which the examination resulted significantly more sensitive and accurate than that undertaken in the consultation. Stylus channelling showed identification accuracy of 85%, as in the case of H₂O₂. The OTE evaluated the main pathways significantly better than the EE and the CE. In 40 (33%) cases, a chronic abscess was found (Table 1), confirmed in 37, with greater reliability for inter-sphincteral and supra-elevator cavities and less for the post-anal space.

Preoperative endoanal ultrasound

The EFO could be channelled in only 90 (75%) cases to instil H₂O₂. Ninety-one IFO were identified, with 78% accuracy. The use of H₂O₂ was significantly more sensitive than the examination without contrast for the detection of IFO (84.5% vs 63%; $P=.02$). Fifty-nine chronic cavities were identified, with greater accuracy for the fistulae classified in 80% of the cases, which was better for the inter-sphincteral approaches (Table 2). Internal anal sphincter (IAS) defects were detected in 31 (27.9%) cases and external (EAS) in 17 (15.9%).

Endoanal ultrasound under anaesthesia

The EFO was cannulated in 91.3% of the cases. The accuracy in IFO detection was 91%, with better sensibility than in the preoperative ultrasound exam ($P=.002$). Furthermore, the accuracy in chronic cavity detection was 91%, with no

Table 1 – Assessment of the physical examination in consultations and surgery

	Sensitivity	Specificity	PPV	NPV	Accuracy
IFO					
EE (n=111/120)	52.3	77.8	96.7	11.7	54
CE (n=46/51)	43.5	80	95.2	13.3	477 ^a
OTE (n=111/120)	82 ^b	100	100	31 ^c	83 ^d
Inter-sphincteral approaches					
EE (n=14/120)	42.9	100	100	93	93
CE (n=7/51)	28.6	90.9 ^b	33.3 ^{a,c}	88.9	82 ^{a,c}
OTE (n=14/120)	78.6	99	100	97.2	97
Trans-sphincteral approaches					
EE (n=74/120)	67.6	84.8	87.7	61.4	74
CE (n=27/51)	55.6	83.3	78.9	62.5 ^a	68 ^a
OTE (n=74/120)	93.2 ^d	95.7	97.2	89.8 ^d	91 ^d
Supra-sphincteral approaches					
EE (n=21/120)	38.1	100	100	88.4	89
CE (n=12/51)	33.3	94.9	66.7	82.2	80 ^a
OTE (n=21/120)	81 ^d	100	100	90.1	96 ^c
Extra-sphincteral approaches					
EE (n=1/120)	0	100	0	99.2	99
CE (n=1/50)	0	98	0	98	100
OTE (n=1/120)	100	100	100	100	100
Chronic abscesses					
EE (n=55/120)	29.1	90.8	72.7	60.2	62.5
CE (n=25/51)	24 ^d	92.3	75 ^a	55.8 ^a	58 ^a
OTE (n=55/120)	67.3 ^d	95.4	92.5 ^c	77.5 ^c	82 ^d

CE indicates consultation examiner; EE, experienced examiner; IFO, internal fistula opening; NPV, negative predictive value; OTE, operating theatre examiner; PPV, positive predictive value.

Findings during surgical interventions in parenthesis. All data stated in percentages.

^a $P<.05$ with respect to OTE.

^b $P<.01$.

^c $P<.05$.

^d $P<.01$ with respect to CE.

Table 2 – Assessment of the endoanal ultrasound in consultations and under anaesthesia

	Sensitivity	Specificity	PPV	NPV	Accuracy
Internal fistular opening					
Consultations (n=111/120)	79.3	66.7	96.7	20.7	78
Operating theatre (n=22/23)	95.5 ^a	100	95.5	0	91
Inter-sphincteral approaches					
Consultations (n=13/119)	53.8	97.2	70	94.5	92
Operating theatre (n=2/23)	100	100	100	100	100
Trans-sphincteral approaches					
Consultations (n=74/119)	82.4	75.6	84.7	72.3	80
Operating theatre (n=13/23)	92.3	90	92.3	90	91
Supra-sphincteral approaches					
Consultations (n=21/119)	47.6	96.9	76.9	89.6	88
Operating theatre (n=7/23)	85.1	94.1	85.7	100	95
Extra-sphincteral approaches					
Consultations (n=1/119)	0	98	0	98	98
Operating theatre (n=1/23)	100	100	100	100	100
Chronic abscesses					
Consultations (n=54/118)	83.3	78.1	76.3	84.7	80
Operating theatre (n=13/23)	84.6	100	100	83.3	91

NPV indicates negative predictive value; PPV, positive predictive value.

Findings during surgical interventions in parenthesis. All data stated in percentages.

^aP<.01.**Table 3 – Magnetic resonance assessment**

	Sensitivity	Specificity	PPV	NPV	Accuracy
Internal fistular opening					
Intraluminal coil (n=16/18)	88.9	100	100	0	88
Superficial coil (n=6/20)	30 ^a	100	100	0	30 ^a
Trans-sphincteral approaches					
Intraluminal coil (n=12/18)	83.3	66.7	83.3	66.7	77
Superficial coil (n=13/20)	92.3	85.7	92.3	85.7	90
Supra-sphincteral approaches					
Intraluminal coil (n=4/18)	80	100	100	92.9	94
Superficial coil (n=3/20)	60	100	100	88.2	90
Chronic abscesses					
Intraluminal coil (n=10/18)	81.8	85.7	91.7	75	83
Superficial coil (n=12/20)	84.6	85.7	91.7	75	85

NPV indicates negative predictive value; PPV, positive predictive value.

Findings during surgical interventions in parenthesis. All data stated in percentages.

^aP<.001.

differences compared to the preoperative stage; the post-anal cavity was more frequent. Neither were there any differences in the identification of associated pathways or in the classification of the primary pathway, although results were better than those for the EAU.

Magnetic resonance

It resulted in a general accuracy of 90% in the localisation of the IFO; the intraluminal coil was more sensitive (88.9%) than

the superficial one (30%) (P<.001) (Table 3). Accuracy in the detection of abscess cavities was of 95% and 85% for associated pathways (Table 4). Ninety-five percent of the fistulae were classified through this examination.

Comparison of the different techniques

The EAU was significantly more sensitive and accurate than the EE to identify IFO and chronic cavities, and the OTE was more so than the EAU for the supra-sphincteral and trans-

Table 4 – Comparison between the endoanal ultrasound and the magnetic resonance in the detection of secondary pathways

	Sensitivity	Specificity	PPV	NPV	Accuracy
Secondary pathways					
EAU (n=43/116)	55.8	79.5	61.5	75.3	81.8
MR (n=7/20)	70 ^a	100	100	76.9	85
Horseshoe pathways					
EAU (n=28/115)	57.1	90.8	66.7	86.8	82
MR (n=10/20)	60	100	100	71.4	8

EAU indicates endoanal ultrasound; MR, magnetic resonance; NPV, negative predictive value; PPV, positive predictive value.
Findings during surgical interventions in parenthesis. All data stated in percentages.
^aP<.05.

Table 5 – Comparison between different examinations

	Sensitivity	Specificity	PPV	NPV	Accuracy
IFO					
EE (n=111/120)	52.3	77.8	96.7	11.7	54
EAU (C) (n=111/120)	79.3 ^a	66.7	96.7	20.7	78 ^a
MR (n=18/20)	90 ^b	100	100	0	90 ^b
OTE (n=111/120)	82 ^c	100	100	31	83 ^a
Inter-sphincter approaches					
EE (n=14/120)	42.9	100	100	93	93
EAU (C) (n=13/119)	53.8	97.2	55.6	97.2	88
MR (n=18/20)					
OTE (n=14/120)	78.6	100	100	97.2	97
Trans-sphincter approaches					
EE (n=74/120)	67.6	84.8	87.7	61.4	74
EAU (C) (n=74/119)	82.4 ^d	75.6	84.7	72.3	80
MR (n=13/20)	100 ^a	71.4	86.7	100	90
OTE (n=74/120)	93.2 ^e	95.7	97.2	89.8	91 ^{a,e}
Supra-sphincter approaches					
EE (n=21/120)	38.1	100	100	88.4	89
EAU (C) (n=21/119)	47.6	96.9	76.9 ^b	89.6	88
MR (n=5/20)	80 ^d	100	100	93.8	95
OTE (n=21/120)	81 ^f	100	100 ^e	96.1	96 ^{c,d}
Chronic abscesses					
EE (n=55/120)	29.1	90.8	72.7	60.2	62.5
EAU (C) (n=54/118)	83.3 ^a	78.1 ^d	76.3	84.7	80 ^b
MR (n=13/20)	92.3 ^a	100	100	87.5	95 ^b
OTE (n=55/120)	67.3 ^{e,g}	95.4	92.5	77.5	82 ^a

CE indicates consultation examiner; EAU (C), endoanal ultrasound in consultation; EE, experienced examiner; IFO, internal fistula opening; MR, magnetic resonance; NPV, negative predictive value; PPV, positive predictive value..

Findings during surgical interventions in parenthesis. All data stated in percentages.

^aP<.01, with respect to EE.

^bP<.001, with respect to EAU in consultation.

^cP<.05, with respect to EE.

^dP<.001, with respect to EE.

^eP<.001, with respect to EAU in consultation.

^fP<.05, with respect to EAU in consultation.

^gP<.05, with respect to MR.

sphincter approaches; there were no differences between both in the identification of the IFO and the EAU was more sensitive for associated cavities (Tables 5 and 6).

The MR was significantly more sensitive than the EE in the identification of the IFO, with trans-sphincter and supra-sphincter approaches and chronic cavities without reaching significant differences when compared with the EAU. It was also more sensitive than the OTE in the detection of associated cavities.

Discussion

Given that a large part of the surgical success of the fistula treatment depends on an adequate anatomical knowledge of it, it is important to have the most thorough information beforehand. The aim of the preoperative assessment is to determine the situation of the IFO, as well as the location

Table 6 – Diagnostic examinations of the anal fistulae classified from greater to less accuracy

IFO	Primary pathway	Chronic abscesses
MR (90)	OTE (93)/MR (92)	MR (95)
OTE (83)/EAU (78)	EAU (86)	OTE (82)/EAU (80)
EE (54)	EE (82)	EE (62.5)
CE (47)	CE (74)	CE (58)
CE indicates consultation examiner; EAU, endoanal ultrasound; EE, experienced examiner; IFO, internal fistula orifice; OTE, operating theatre examiner; MR, magnetic resonance. Data in parenthesis stated in percentages.		

of the primary and secondary pathways and the associated cavities.⁶ Furthermore, it is vital to know the integrity and function of the anal sphincter that can be affected by the treatment. Besides the surgeon's clinical assessment, we have imaging methods, such as EAU and MR, sometimes used quite generously despite there being very few studies which confirm their usefulness.

As a reference criterion, we have employed the actual surgery, performed by surgeons with special dedication to coloproctology. This has also been the criterion used in other studies,^{1,7-9} as well as the masking of examinations that have acted as blind tests against the preceding examinations.⁷⁻¹¹

Consultation examination is the most used method. The localisation of the IFO is vital for a satisfactory result as far as relapses are concerned. Once the EFO is localised, present in 97.5% of the cases, we can intuitively find its situation using Goodsall's rule, which is only met in less than half the cases, although the posterior EFOs abide by it in 84.6%, similar to the findings by Cirocco et al.¹² Both EE and CE results have been low in the localisation of the IFO. Palpation of a subcutaneous pathway usually corresponds with a simple fistula, as long as there are no concomitant factors. Sensitivity in the diagnosis of fistula type has been lower for the least experienced examiner, without reaching significant statistics, data similar to that reported by Dunphy et al.⁷

Operating theatre examination is customary at the start of the intervention, following the same steps but without the inconveniences caused by its discomfort. Indeed, the results have been better as far as accuracy is concerned, close to 90% in most of the studied parameters, similar data has been obtained from other studies and it has been noted that the best diagnostic results are from experienced surgeons.^{1,4,13} However, there is some bias since the reference criteria are that of the intervention per se. We believe that instrumental examinations, using styluses and H₂O₂ instillation should be left for the exam under anaesthesia and decide at consultation only whether the fistula is complex or not with strategic aims (supplementary imaging methods, surgical preparation, etc).

Fistulography supplies minimally useful data and is difficult to interpret, therefore it should be discarded.¹⁴ After some initially discouraging results,^{4,8} the EAU has proven useful in the anatomical identification of the anal fistulae^{1,5,9,15}; it is a simple method which causes minimal discomfort, but the interpretation of the images can sometimes be difficult.

Its accuracy varies not only according to the examiner and the type of fistula, but also depending on the surgery or prior sepsis, which can be confusing factors, although for some authors it can still be useful in these cases.¹⁶ According to the data published, its accuracy varies from 36% to 95%.^{1,4,15,17} We have classified 89% of the fistulae with EAU, with an accuracy of 80% to 98%, according to type in the preoperative exam and from 90% to 100% in those performed under anaesthesia. This last examination was undertaken in a lower number of patients to analyse its reliability in the anaesthetised patient, in which the exam can be performed in a more comfortable way, especially when perfused with diluted hydrogen peroxide. Results for inter-sphincteral and trans-sphincteral fistulae coincide with those from other series^{1,15} and are better than others for supra-sphincteral fistulae (88%), and it has even been indicated that they have no use in them,⁴ and that the preoperative findings do not influence the postoperative result.¹⁸ This is due to the difficulty in making rigid probe contact of the ultrasound with the inferior rectal wall and due to the attenuation of the ultrasound beam with the increased distance. One of the most difficult assessment elements is the identification of the IFO. Cho's criteria,⁵ which are broader than others described,^{4,19} gave it an accuracy of 79%, similar to the 78% obtained in our consultations and lower than the 91% in the cases undertaken with H₂O₂ as a contrast in the operating theatre (75% and 90%, respectively). For Navarro et al,²⁰ the use of H₂O₂ allowed for a correct diagnosis of the IFO in 94% of the cases; although, Ortiz et al²¹ only reached 62.5%, according to the accuracy of the criteria employed for its definition. The benefits of highlighting with diluted H₂O₂ were reported by Cheong et al,⁹ which is particularly useful in cases of recurrent fistulae with associated scar pathways. Therefore, it has been indicated that its use is superior to that of the EAU in basal conditions,¹⁵ although bubbling within the anus can cause reverberations. For the identification of chronic abscess cavities, the published results show the usefulness of EAU with accuracy close to 100%,²² even though there is an inconsistency in its reliability to locate them topographically. Consequently, we have reached an accuracy of 80% in the identification of chronic cavities, but this reaches 91% for supra-elevator and 93% for inter-sphincteral abscesses; similar or even superior results reported by other authors.^{1,4,8,15,20}

Furthermore, it may be useful to identify the secondary pathways; the most noted results are for those in horseshoe extension, since we have obtained an accuracy of 85.7% in the high range of the reported figures (50%-95%).^{1,15,20}

Most of the fistulae, in practice, do not require an ultrasound assessment for adequate treatment, and its main use is to aid surgeons with less experience in this disease in the cases where clinical examination has been insufficient; since it has been observed that the ultrasound can influence in the treatment of 38% of the cases, usually towards a more conservative approach,²³ and also if there is a suspected complex fistula, with possible cavities and secondary pathways. In our study, it was significantly superior to the preoperative examination for the assessment of the IFO and associated cavities. On the other hand, if it is performed systematically, we observe that it is detected in a considerable percentage of sphincteral lesions, some in patients without prior faecal incontinence,

as reported by Deen et al.²⁴ Another aspect is the decision of when to undertake it. In our study, the results were better in the surgery, perhaps because H₂O₂ could be instilled more frequently.

MR is the most recently introduced technique,^{17,25} and it has had a promising beginning, due to the possibility of the evaluation on 3 planes and its capacity to show pus and granulated tissue. We used STIR sequences and enhanced T2, like other authors,^{6,17} with intraluminal antenna and no contrast, with a good tolerance level among patients. The superficial coil has been useful to evaluate secondary collections and fistular pathways, as reported in other studies,^{2,6,10,11,25-27} but for the detection of IFO we have observed poor accuracy, of only 30%, as have other authors,^{10,26} while in other works it has reached 80%-97%^{11,25,28} due to the technological improvements which have led to abandoning the intraluminal antenna and the associated discomfort and possible distortions. Its inconvenience is the poorer visualisation over the elevator muscle plane and of the laterally outlying extensions, although in prior comparative studies the intraluminal resulted more reliable in fistula opening detection.^{16,17} We have combined both in our study and obtained a high agreement with the surgical findings.

Several studies show that MR is the most precise examination, even superior to the anaesthetised patient exam,^{22,25-27} as shown in our observations, with no significant differences and it has been affirmed that it prevents recurrences.²⁹ It covers the defects of other, more traditional examinations and it has become the most promising imaging technique for the assessment of pelvic affection, especially with the technological advances in this field.³⁰ The use of MR can be of great use in the cryptoglandular origin fistulae in patients with recurring sepsis in which the clinical examination is difficult. This is why it is of greater interest in the assessment of specific fistulae and especially of those related to Crohn's disease. The availability of a radiologist with broad knowledge of the anatomy of the area that employs a language similar to that of the surgeon is fundamental.

In general, we have seen that it is superior to the EAU in the assessment of IFO, associated cavities and also to define trans-sphincteral and supra-sphincteral approaches, although with no significant differences, probably due to the low number of patients studied. In the prospective studies that compare those,^{17,25,28,30} it is better than the EAU. In a recent review of their literature, Sahni et al.³¹ found that MR is more sensitive than the clinical examination (97% vs 75%), but comparable with EAU (92%) in the differentiation of simple and complex fistulae.

To conclude, for the surgeon experienced in coloproctology, the imaging methods are an occasional supplement in the clinical assessment, which remains of great importance. For those less experienced, it can help them in deciding the most appropriate treatment and, in particular, the endoanal ultrasound can be useful in better locating the internal fistula opening and the associated abscess cavities. Our team's criteria is to request these examinations when faced with the suspicion of a complex fistula, either due to difficulties in marking the pathway or the IFO in the consultation, or in cases where there may be possible concomitant sphincteral lesions.

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