**Audit on MRI protocol and reporting for suspected fistula-in-ano**

**[QSI Ref: MR-808]**

**Descriptor:**

The objective of the audit is to evaluate and optimize the department's MRI fistula-in-ano protocols, aiming to improve imaging adequacy and reporting accuracy.

**Background:**

## Fistula-in-ano is a condition that requires accurate diagnosis and assessment for effective treatment. MRI is the preferred imaging modality [1][2], but there can be variability in its performance across sites. The ESGAR expert group has published a consensus statement in 2020 to guide imaging practices in fistula-in-ano with standardisation in MRI acquisition techniques and reporting [1]. Standardized protocols and reporting guidelines are essential to improve the consistency, reliability and quality. Disease-specific structured reporting templates have been developed to optimize communication of key imaging findings [2]. MRI is also valuable for diagnosing other pathologies causing anal sepsis, and several studies have demonstrated its diagnostic and therapeutic impact [1]. Optimizing imaging and reporting is crucial for reliable and high-quality images and appropriate surgical treatment.

## The Cycle

**The standard:**

MRI acquisition technique:

1. The patient should be positioned supine for the MRI examination.

2. Surface coil is used.

3. MRI examination for suspected fistula-in-ano should include axial, coronal, and sagittal planes T2-weighted sequences.

4. The axial and coronal planes should be aligned with the anal canal axis.

MRI report:

1. Parks classification should be included for any identified fistula.

2. If multiple fistulas are present, the report should state the total number of fistulas. Each individual fistula should then be described

3. The exact radial location of the fistula, internal opening, and external opening should be identified using the "clock face" nomenclature or with reference to anal quadrants.

4. The height of the internal opening should be described relative to adjacent structures

5. Multiple fistulas, internal openings, or external openings should be stated along with their numbers and locations.

6. Any anatomical extensions identified should be reported, along with their locations and maximal cavity diameter used as an indication of their size.

**Target:**

100% of the MRI protocol and reports for fistula-in-ano should meet these standards.

## Assess local practice

**Indicators:**

The percentage of MRI protocol and reports which adhere to each of the standards.

**Data items to be collected:**

MRI acquisition technique:

1. Are patient positioned supine for the MRI examination?

2. Is surface coil used?

3. Does the MRI protocol encompass the correct sequences and planes?

MRI report:

1. Does the radiological report include the Parks classification for any identified fistula?

2. Is the total number of fistulas stated in the report when multiple fistulas are present? Are individual descriptions provided for each fistula?

3. Does the radiological report identify the exact radial location of the fistula, internal opening, and external opening using the "clock face" nomenclature or with reference to anal quadrants?

4. Is the height of the internal opening described relative to adjacent structures? Is an exact measurement (in mm) provided, if possible?

5. Are multiple internal or external openings mentioned in cases where a single primary fistula track has them? Are the number and locations of these openings stated?

6. Are cases where multiple fistula tracks share a single internal or external opening mentioned? Is the location of the shared opening provided?

7. Does the radiological report indicate the anatomical location of any extensions identified, irrespective of whether they are inter-sphincteric, ischio-anal, supralevator, or in any other anatomical location?

8. Does the report provide an indication of the size of any identified extensions? Is the maximal cavity diameter used as a reflection of size?

**Suggested number:**

MRI scans indicated for fistula-in-ano or other anal sepsis for both paediatrics and adult should be collected and reviewed. All cases performed during the preceding six months, or the most recent 30 consecutive cases (whichever number is greater)

**Suggestions for change if target not met:**

1. Disseminate the standards of MRI protocol and reporting for fistula-in-ano, via in-person departmental radiology meetings to radiologists and radiographers.

2. Develop a structured MRI report template for fistula-in-ano to be used during electronic report transcription, aiming to enhance the standardization of reporting descriptors.

3. Conduct a re-audit after six months to assess for improvement in practice. Maintain an ongoing audit cycle to ensure sustained compliance with the established standards.

**Resources:**

1. Radiology information system (RIS) to review administrative details and reports.

2. Picture archiving computer system (PACS) to review MRI protocol and images.

3. Statistical computer software, such as Microsoft Excel, for recording and analysing data.

**References:**

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2. Stanzione, A., Boccadifuoco, F., Cuocolo, R., Romeo, V., Mainenti, P. P., Brunetti, A., & Maurea, S. (2020). State of the art in abdominal MRI structured reporting: a review. Abdominal Radiology, 46(3), 1218–1228. <https://doi.org/10.1007/s00261-020-02744-8>

3. Tolan, D. J. M. (2016). Magnetic Resonance Imaging for Perianal Fistula. Seminars in Ultrasound, CT and MRI, 37(4), 313–322. <https://doi.org/10.1053/j.sult.2016.04.004>

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