

Surgical Management of Cryptoglandular Fistula-In-Ano in Tertiary Centres under One Colorectal Unit

Zhi Xian Wong, MbChB
Blackpool Teaching Hospitals NHS Foundation Trust

INTRODUCTION

Fistula-in-ano (FIA) is an abnormal tract which exists between the perianal skin and the internal mucosa of the anorectal region. The incidence of FIA was 1.84 per 10,000 per year in England back in 2004.¹

To effectively manage FIA, several classification systems have been proposed over time. These include Park's, St. James Hospital University (SJHU), Standard Practice Task Force (SPTF) and recently Garg's classifications of FIA.²⁻⁵ All systems have their own strengths and shortcomings as guidance for surgeons operating on FIA.⁶

Over the past decade, new treatments emerged in attempt to achieve the three main principles of FIA treatment: sepsis control, recurrence prevention and anal sphincter function preservation.⁷

OBJECTIVES

- To evaluate the surgical management and recurrence rates of FIA
- To investigate documentation of faecal continence level in a single colorectal unit.

METHODS

Data Extraction

- 100 patients who underwent a total of 251 examinations under anaesthesia (EUA) for cryptoglandular FIA between November 2004 and September 2018
- Anonymous data from referral, follow-up and operational discharge letters, as well as histological and radiological reports

Inclusion Criteria

- Female and male patients aged 15 and above
- Clinically diagnosed with FIA
- At least 1 EUA for planned or emergency FIA treatment in any of 3 hospitals of the same region within the period of study

Exclusion Criteria

- Inflammatory bowel disease
- Rectovaginal fistula
- Only undergone incision and drainage of perianal abscess, but not treatments for FIA

Statistical Analysis

- Descriptive statistics via the software IBM® SPSS Statistics 20.

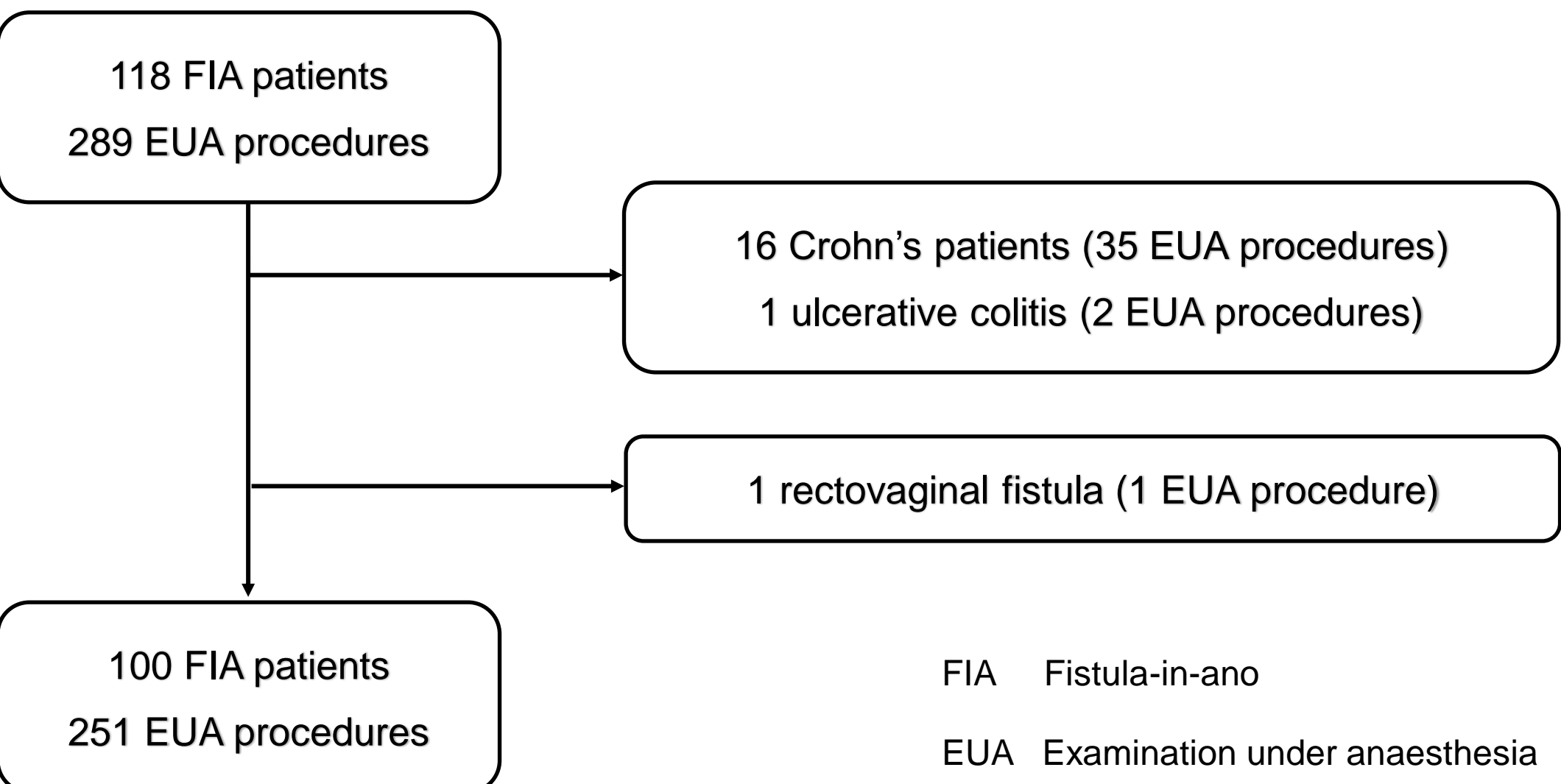


Figure 1. Flow Chart of Study Selection.

RESULTS

Patient Demographics and Referral Types

- 65 males and 35 females
- mean age during EUA (first EUA if multiple treatments) was 46
- 50% general practitioners (GP) referrals
- 26% emergency referrals
- 15% referrals from both sources.

Fistula Characteristics

- 30% intersphincteric
 - 25% transphincteric
 - 3% suprasphincteric
 - 14% had more than 1 FIA type
 - 28% of FIA type unreported or unclear
- 31 had multiple FIA tracts involved, in which:

- 8 associated with levator ani
- 10 were either horseshoe, H-shaped or Y-shaped fistulae

Investigations and Duration of Hospital Admission

- 17% had no magnetic resonance imaging (MRI)
- 49% had 1 MRI
- 17% had 2 MRIs done
- 17% had 3 or more MRIs
- 61% did not require any stay in hospital after surgery

Treatments

- median number of procedures was 2 (range of 1-18)
- 91.2% of surgeries were elective whilst 8% were emergency.
- 34 patients had 1 EUA only
- almost a third (32%) underwent 3 or more EUAs
- 18 patients received only seton treatments
- 54 had 1 type of definitive treatment
- 28% had 2 or more types of definitive treatment
- 11 (14.7%) out of 75 experienced seton(s) dislodgement

Treatment	Number of Patients	Total Number of Treatments
Fistulotomy (laying open)	51	60
Partial fistulotomy	5	5
Fistulectomy (excision)	17	19
Partial fistulectomy	12	12
Seton (may overlap with cutting seton if not specified in documents)	72	133
Cutting seton	6	7
Both seton and cutting seton	75	140
Advancement flap	8	8
LIFT	2	2
Permacol™	17	19
VAAFT	2	2
Fistula plug	1	3
Fibrin glue	1	1
Excision of scarring tissue & abscess; fasciocutaneous flap & defunctioning stoma	1	1

LIFT ligation of intersphincteric fistula tract
VAAFT video-assisted anal fistula treatment

Table 1. Types of Fistula-In-Ano Treatment, Number of Patients and Total Number of Treatments.

Follow-Up, Clinical Outcome and Faecal Continence

- median period of follow-up was 11 months
- 46 discharged
- 27 had long-term seton in-situ management
- 21 under clinic
- 4 were given open appointment for a year
- recurrence rate was 27% after first definitive treatment
- 86% had no information on pre-operative and post-operative faecal continence levels

DISCUSSION

- Management of FIA has always been challenging due to **lack of standardised guidelines**
- Routine follow-up after initial drainage and incision was neither justified nor practical
- Clinician should perform history-taking and physical examination, digital rectal examination with or without proctoscopy, depending on patient's tolerability
- Routine MRI pelvis is not required for superficial and simple fistulas⁸
- In practice, MRI scans of the pelvis were often helpful in the planning for upcoming operations
- Refractory FIAs rendered the **balance between symptom control and sphincter preservation** extremely challenging

LIMITATIONS AND SUGGESTIONS

- Lack of systematic documentation of important information and standardised follow-up period
- Cutting or non-cutting setons not specified
- Clinical outcomes might be unreliable as of completion of data collection
- Unable to compare recurrence rate with available literatures
- Baseline and post-operative faecal continence levels not recorded
- Proforma designed to improve documentation of FIA cases in future

The form includes sections for patient details (name, sex, date of birth, address, telephone), baseline data form (past medical history, fistula history, Weener Score), and examination details (tenderness, discharge, seton, digital rectum examination, comments). It also features a diagram of the rectum and anus with numbered points 1, 2, and 3.

Figure 2. Page 1 of FIA proforma – Baseline details

The form includes sections for patient details (name, date of birth), examination under anaesthesia (EUA) findings (fistula findings, external opening, length of pathway, level of internal opening, fistula type, external sphincter involvement, extent of external sphincter involvement, number of secondary tracts, supraprostate/prostate extensions, other symptoms), interventions (EUA performed, antibiotics given, analgesia and drainage performed, wound care, any seton insertion or change, cutting or non-cutting seton, seton material, procedure performed), and complications.

Figure 3. Page 2 of FIA proforma – Examination under Anaesthesia (EUA)

The form includes sections for patient details (name, date of birth), post-operative review (date of follow up, surgeon name, diagnosis, procedure date, recurrence, symptomatic, if yes details, ongoing perianal sepsis/drainage, fistula healed, seton in-situ, comments), and Weener Score (type of incontinence, never, rarely, sometimes, usually, always).

Figure 4. Page 3 of FIA proforma – Post-operative review

CONCLUSION

- Recurrence rate was 27%
- 86% patients had no documentation of pre-operative and post-operative faecal continence levels
- Importance of systematic documentation to facilitate treatment plans for FIA

REFERENCES

- Zanotti C, Martinez-Puente C, Pascual I, Pascual M, Herreros D, García-Olmo D. An assessment of the incidence of fistula-in-ano in four countries of the European Union. *Int J Colorectal Dis* 2007;22(12):1459-1462.
- Parks AG, Gordon PH, Hardcastle JD. A classification of fistula-in-ano. *Br J Surg* 1976;63(1):1-12.
- Morris J, Spencer JA, Ambrose NS. MR imaging classification of perianal fistulas and its implications for patient management. *Radiographics* 2000;20(3):623-635.
- Whiteford MH, Kilkenny J 3rd, Hyman N, Buie WD, Cohen J, Orsay C, et al. Practice parameters for the treatment of perianal abscess and fistula-in-ano (revised). *Dis Colon rectum* 2005;48(7):1337-1342.
- Garg P. Comparing existing classifications of fistula-in-ano in 440 operated patients: Is it time for a new classification? A Retrospective Cohort Study. *Int J Surg* 2017;42:34-40.
- Garg P. Garg Classification for Anal Fistulas: Is It Better than Existing Classifications?—a Review. *Ind J Surg* 2018;80(6):606-608.
- Naranga SK, Keogh K, Alama NN, Pathaka S, Danielsa IR, Smart NJ. A systematic review of new treatments for cryptoglandular fistula in ano. *The Surg* 2017;15(1):30-39.
- Vogel JD, Johnson EK, Morris AM, Paquette IM, Saclarides TJ, Feringold DL, et al. Clinical Practice Guideline for the Management of Anorectal Abscess, Fistula-in-Ano, and Rectovaginal Fistula. *Dis Colon Rectum* 2016 Dec;59(12):1117-1133.

ACKNOWLEDGEMENT

I would like to thank Miss Dorin Ziyaie for her guidance and supervision throughout the course of this study.