

INPLASY PROTOCOL

To cite: Li et al. Diagnostic Accuracy of three-dimensional endoanal ultrasound for anal fistula: a systematic review and meta-analysis. Inplasy protocol 202070090. doi: 10.37766/inplasy2020.7.0090

Received: 20 July 2020

Published: 20 July 2020

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Support: None.

Review Stage at time of this submission: Data extraction.

Conflicts of interest:
None.

Diagnostic Accuracy of three-dimensional endoanal ultrasound for anal fistula: a systematic review and meta-analysis

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Review question / Objective: Anal fistula is a relatively common anorectal disease. Accurate assessment of the main anal fistula type and the anatomy of the internal opening before surgery is necessary to obtain the best surgical results. Whether 3D-EAUS should be used as the first-line diagnostic tool for anal fistula is still controversial.

Condition being studied: Anal fistula is a relatively common anorectal disease, usually occurring in young adults, aged 21-42 years. Some studies have pointed out that the incidence of anal incontinence after anal fistula surgery is 0-40%, and the recurrence rate is 0-26.5%, the reason may be that the internal openings was not accurately found before the operation, the fistula was not completely treated, or the fistula branch was missed, and the shape of the fistula was not understood, etc., resulting in excessive intraoperative anal sphincter injury. Therefore, accurate assessment of the main anal fistula type and the anatomy of the internal opening before surgery is necessary to obtain the best surgical results.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 July 2020 and was last updated on 20 July 2020 (registration number INPLASY202070090).

INTRODUCTION

Review question / Objective: Anal fistula is a relatively common anorectal disease. Accurate assessment of the main anal fistula type and the anatomy of the internal opening before surgery is necessary to obtain the best surgical results. Whether 3D-EAUS should be used

as the first-line diagnostic tool for anal fistula is still controversial.

Rationale: The purpose of this study is to conduct a meta-analysis of the published literature on 3D-EAUS and anal fistula, and compare the results of 3D-EAUS and surgery to evaluate the diagnostic value of 3D-EAUS for anal fistula.

Quality assessment / Risk of bias analysis: Study quality was independently assessed using a tool for the Quality Assessment of Diagnostic Accuracy Studies-2 (QUADAS-2). Perform publication bias diagnosis and sensitivity analysis for included studies.

Strategy of data synthesis: Use STATA 15.1 and Revman 5.3 software for data analysis. After the diagnostic accuracy of 3D-EAUS of all anal fistula types was integrated, a single group rate meta-analysis was performed; analyze 3D-EAUS separately for the diagnosis of different anal fistula types, and conduct a meta-analysis of test accuracy.

Subgroup analysis: This study conducted a subgroup analysis of two covariates, the study population and the use of instruments.

Sensibility analysis: Perform sensitivity analysis for included studies.

Language: English.

Country(ies) involved: Sri Lanka; Italy; England; Spain; Iran; Korea; Poland; Malaysia; Singapore; Netherlands.

Keywords: Ultrasound; Endoanal; Three-dimensional; Anal fistula; Meta-analysis.

Contributions of each author:

Author 1 - Jin Li.

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