

Comparison of Preoperative Endoanal Ultrasonography with Intraoperative Findings for Fistula In Ano

Duminda Subasinghe ·
Dharmabandhu N. Samarasekera

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Abstract

Background Fistula in ano is a common benign anal condition seen in surgical practice. If fistula anatomy is incorrectly delineated or an occult abscess is missed, there is a risk of incomplete healing, recurrence of the fistula, or even iatrogenic sphincter injury from surgery resulting in anal incontinence. Therefore, an imaging modality ideally would provide accurate information that can be used to delineate the tract(s) prior to surgery. The aim of this study was to determine the accuracy of endoanal ultrasonography (EAUS) during the preoperative assessment of anal fistula tracts in respect to the type of the fistula, horseshoeing of the tract, and localized collections.

Methods A consecutive series of 64 patients underwent preoperative EAUS assessment of the fistula. All patients subsequently had surgical exploration under anesthesia irrespective of findings at sonography. The operative findings were compared with the US findings. The association between EAUS and operative findings was determined by nonparametric Spearman's rank correlation (ρ) coefficient test.

Results The male/female ratio was 58:6. Mean age was 41.53 years (range 11–60 years). EAUS detected the fistula tract in most (95.3%). On EAUS, the primary tract was transsphincteric, intersphincteric, or superficial in 34 (53.1%), 25 (39.1%), and 2 (3.2%) patients, respectively. Localized collections were identified in 24 of the 64

(37.5%) patients ($\rho = 0.986$). The fluid collection locations were 12 intersphincteric, 7 superficial, 4 infralevator, and 1 supralevator. At surgery, 38 (59.4%) fistula tracts were transsphincteric, 17 (26.6%) intersphincteric, 5 (7.8%) suprasphincteric, and 3 (4.7%) superficial. US correctly predicted the primary tract in 71.9% of fistulas ($\rho = 0.5$). **Conclusions** EAUS has high accuracy for predicting the type of anal fistula and for detecting associated sepsis/fluid collections. This information is useful for preoperative planning of fistula treatment. EAUS therefore is an accurate test for determining fistula anatomy prior to surgery.

Introduction

Fistula in ano is a common benign anal condition seen in surgical practice. Surgical treatment for anorectal fistula may be difficult because of the risk of recurrence, prolonged healing, and possible anal incontinence that may result following surgery. It often recurs despite adequate surgery as a result of missed secondary tracts. It is now increasingly recognized that preoperative imaging can help identify sepsis and/or accessory tracts that would have otherwise gone unidentified [1]. Although several articles have analyzed the role of EAUS in fistula in ano [2–4], few articles have comparing EAUS findings directly with those during surgery [5, 6]. Our objective was to compare the preoperative findings of EAUS (i.e., primary fistula tract, fluid collections/sepsis, secondary tracts; Fig. 1) with those during surgery.

Materials and methods

A prospective comparison was done between the EAUS findings and operative findings in 64 consecutive patients

D. Subasinghe · D. N. Samarasekera (✉)
University Surgical Unit, National Hospital of Sri Lanka,
Colombo, Sri Lanka
e-mail: samarasekera58@yahoo.co.uk

Present Address:
D. N. Samarasekera
28/1 Ishwari Road, Colombo 06, Sri Lanka