



LIFT combined with mucosal advancement flap for transphincteric fistulas

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Dear Sir,

The surgical options available to treat and heal complex anal fistulae have not been fully optimised. The conventional surgical approaches for simple anal fistulae if applied can result in poor healing and a significantly high chance of incontinence [1–3]. Therefore, the treatment of choice for complex fistulae involves a sphincter-sparing approach such as Ligation of Intersphincteric Fistula Tract (LIFT) or a mucosal advancement flap. Factors such as surgeon choice or a preferred intuitional practice play an important role in deciding an optimal surgical method [4].

We retrospectively analysed our own series of LIFT with or without advancement flap for complex cryptoglandular transphincteric anal fistulas between 2012 and 2017. To decrease the ambiguity in the definition of a ‘complex fistula’, we excluded from the final analysis any transphincteric fistula with $\leq 30\%$ external anal sphincter (EAS) involvement and/or fistulas that were non-cryptogenic in origin. We defined fistula healing as complete healing of the fistula with no discharge at 18 months after surgery. Failure of treatment was defined as need for repeating either the primary procedure and/or a combination of other procedures and/or persistent discharge at 18 months. All patients in the study had preoperative magnetic resonance imaging of the perineum to assess the anatomy of the fistula tract prior to the primary procedure. Of 41 patients eligible for final analysis, 36 (87.8%) underwent LIFT and 5 (12.1%) underwent LIFT plus mucosal flap. The median age of the patients in the study cohort was 42 years (IQR 29–79 years). There were 23 males and 18 females patients. Twelve patients were smokers, 7 were ex-smokers and 22 were non-smokers.

Fourteen patients had a body mass index (BMI) ≤ 25 m²/kg; 13 patients had BMI of 25–29 m²/kg and 14 had a BMI of 30–40 m²/kg. The most common ethnicities recorded were white Caucasians ($n=29$) and Asians ($n=12$). A total of 23 patients (63.8%) in the LIFT group and 2 patients (40%) in the LIFT plus advancement flap group had overall complete healing at mean time of 18 months after surgery. In the LIFT group, 21 patients (58.3%) healed after the primary procedure and 41 (11.1%) needed either a repeat LIFT and/or advancement flap to achieve complete healing. In the LIFT plus group, 3 patients (60%) needed a repeat procedure and at 18 months have not yet fully healed. Overall, 18 patients (43.9%) needed a redo and/or a second new procedure. A subgroup analysis of LIFT vs combined procedure showed no statistical difference in the overall ($p=0.3$) and primary ($p=1.0$) healing rates between the two groups. However, the secondary healing rate was found to be higher and statistically significant ($p=0.02$) after primary LIFT compared to LIFT plus flap (Table 1). The mean time for primary healing was found to be 105.5 days (range 43–230 days). In the LIFT group, the analysis of overall healing (63.8%) and non-healing (36.1%) rates based on patient demographics did not reveal any statistically significant difference between gender, smoking status, ethnicity and BMI. However, time to definitive fistula surgery from primary diagnosis and a total number of previous operations were all found to influence the fistula healing rate.

The retrospective nature of the study meant some of the information analysed depended on patient notes which were at times not an accurate representation. Further, there were some variations in technique from the techniques published by different authors for both LIFT and LIFT plus flap procedures [5, 6]. We believe this may have led to a degree of inter-study variability thereby making comparisons with published results yet more difficult. We also found a large disparity in patient numbers between the two groups which has been the major limiting factor for an accurate analysis of our results.

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Table 1 Healing rates for LIFT vs LIFT plus procedure

Procedure(s)	Overall healing rates (%)	Primary healing rates (%)	Secondary healing rates (%)	Non-healing rates (%)
LIFT alone	63.8 (23/36)	58.3 (21/36)	5.5 (2/36)	36.1 (13/36)
LIFT plus mucosal advancement flap	40 (2/5)	0	40 (2/5)	60 (3/5)
Healing rates				
<i>P</i> value (0.05)				
LIFT vs LIFT plus mucosal flap: statistical analysis				
LIFT alone	Overall healing rates			
LIFT plus mucosal advancement flap	Primary healing rates			
	Secondary healing rates			
	0.3			
	1.0			
	0.02			

LIFT ligation of intersphincteric fistula tract

In conclusion, the LIFT procedure is a safe and effective technique for the treatment of complex transsphincteric fistulas. Our findings are in-keeping with published studies for the overall healing and treatment failure rates after LIFT procedure.

We observed no additional benefit when mucosal advancement flap was combined with the primary LIFT procedure. Patient demographics did not appear to have a significant impact on surgical outcomes, which suggests that the LIFT procedure is suitable for a broad range of patients.

Compliance with ethical standards

Conflict of interest I, Tasadooq Hussain hereby disclose there is no conflict of interest in the submission of this piece of work to the journal for publication. All the authors listed on the paper have been directly involved in producing the manuscript and have not received any financial support and/or grant for the research or in writing of the manuscript.

Ethical approval No ethical approval was needed for this study but local audit department was involved.

Informed consent All the patients included in the study were consented for using their data for research analysis.

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