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DISTAL LASER PROXIMAL FISTULOTOMY IN ANOSCROTAL FISTULA: A TARGETED APPROACH FOR COMPLEX PERIANAL FISTULA

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ABSTRACT

Anoscrotal fistulas represent a challenging subset of complex perianal fistulas due to their atypical course and proximity to sensitive anatomical structures. The technique of Distal Laser Proximal Fistulotomy (DLPF) offers a hybrid approach that combines the precision of laser ablation with the efficacy of traditional fistulotomy. This article explores the rationale, methodology, and clinical outcomes associated with DLPF in the management of anoscrotal fistulas.

KEYWORDS: Anoscrotal Fistula, Complex Perianal Fistula, Distal Laser Ablation, Proximal, fistulotomy, Sphincter-sparing technique, Fistula-in-ano, Laser Surgery, Minimally invasive Fistula Treatment, Diode Laser.

INTRODUCTION

Perianal fistulas are abnormal tracts connecting the anal canal to the perianal skin. Anoscrotal fistulas, a rare and complex variant, typically involve a longer, curved tract that extends toward the scrotum. Traditional treatment options, including fistulotomy or seton placement, may pose risks of sphincter damage or inadequate healing. Distal Laser Proximal Fistulotomy (DLPF) offers a sphincter-sparing alternative by combining distal tract laser ablation with a proximal open fistulotomy for enhanced healing and control.

CASE REPORT

This is a case of a 54 yr old male patient having a recurrent discharge from scrotal area and came to SSAM and H for management.

Cheif Complaints

1. Recurrent discharge from the scrotal area.
2. Pain and discomfort in the scrotum, especially while sitting.
3. Swelling or lump in the scrotal region.
4. Itching or irritation at scrotum.
5. Soiling of undergarments due to continuous discharge. Since 6 months.

History of Present Illness

The patient is a [54]-year-old male who presents with complaints of persistent discharge and intermittent pain in the scrotal and perineal region for the past 6 months. The discharge is described as purulent, sometimes blood-stained, and is noted to soil undergarments, especially after bowel movements. He reports swelling and occasional throbbing pain in the area, which worsens when sitting or during defecation. So the management of above complaint she came to OPD of Shalyatantra department of SSAM and H.

Past History

He had no history of diabetes mellitus, hypertension, bronchial asthama and hypothyroidism or hyperthyroidism.

He had no any surgical history. He had no any allergic history.

Family History

No any family History.

Personal History

Name –XYZ Age-54 year/male Marital status- Married Occupation- Farmer

Addiction – No Bowel –Regular Appetite –Good

General Examination

Blood pressure-130/90 mm hg. Pulse- 86/min.

Peripheral oxygen saturation (SpO2)- 98% on room atmosphere. Respiratory rate – 23/min.

Temp.-98.6°F

Pallor/icterus-No Weight -78kg Height -5.8ft.

Systemic Examination

Respiratory system- Air entry bilateral equal (AE=BE) Cardiovascular system – S1 S2 normal, No murmur.

Central nervous system – Patient is conscious and well oriented to time, place and person Abdominal examination- Soft and non- tender.

Local Examination

Inspection

A single external opening is noted on the base of the scrotum, approximately [10] cm from the anal verge.

The surrounding skin shows signs of maceration and scarring. Intermittent purulent discharge is observed from the external opening.

Palpation

On gentle compression around the fistulous opening, purulent discharge is expressed.

A cord-like indurated tract can be palpated extending from the external opening toward the anal canal.

Digital Rectal Examination (DRE)

Internal opening palpable at 12 ‘o'clock position.

Investigation

HB%	14.3 G%
WBC	9800 /mm³
Platelet count	3.45lac/mm³
BSL Fasting	88mg/dl
Post prandial	124mg/dl
Serum Creatinine	0.64mg/dl
HIV(1 and 2)	Non reactive
HBsAg	Non reactive
Bleeding Time	4 min 43 sec
Clotting Time	6 min 25 sec

Preoperative Optimization

Nutritional support

Bowel preparation with enema Physical fitness

Informed written consent Xylocaine 2%sensitivity test done Inj TT 0.5 CC IM stat given IV antibiotics administered perioperatively.

Surgical Procedure

Surgical Procedure: Distal Laser Proximal Fistulotomy Patient placed in lithotomy position under spinal anesthesia.

1. Identification of Fistula Tract.

The tract is delineated and confirmed manually then with hydrogen peroxide and methylene blue through external opening.

2. Proximal Fistulotomy

The portion of the tract near the internal opening and anal verge (proximal tract) is laid open using electrocautery.

The internal opening is curetted and allowed to heal by secondary intention.

3. Distal Tract Laser Ablation

A radial fiber diode laser probe (usually 1470 nm wavelength) is introduced through the external (distal) opening.

Controlled laser energy is delivered (typically 10–15 Watts/cm in continuous mode) while slowly withdrawing the probe, leading to photothermal shrinkage and sealing of the distal tract.

This ablates the curved or scrotal part of the tract while preserving surrounding tissues.

Postoperative Period

Vital Sign Monitoring: Regular assessment of blood pressure, pulse, oxygen saturation, and temperature.

IV Medications

Inj monocef 1gm IV BD Inj Pan 40mg IV BD

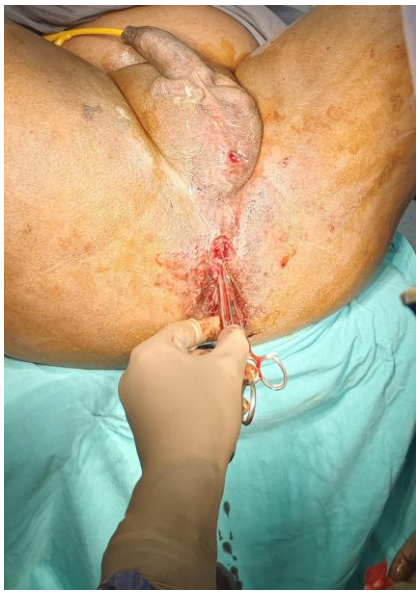
Inj Emset 4mg IV BD

Inj Dynapar 75mg IV BD IVF NS 500 ml

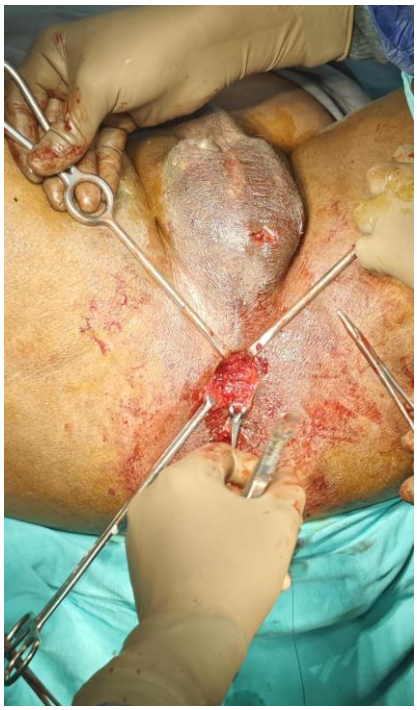
DNS 500ml RL 500ml

IV fluid- 50 ml/hr

OBSERVATION AND RESULT



Probing of fistula tract



Interception of fistula tract

DISCUSSION

Advantages of DLPF

Sphincter Preservation: The distal tract is treated without cutting, preserving continence.

Minimal Invasion: Laser ablation reduces tissue trauma and postoperative pain.

Targeted Healing: By opening the proximal tract, adequate drainage and healing are

promoted. Improved Cosmesis: The scrotal area is spared open surgery, reducing scarring.

CONCLUSION

Distal Laser Proximal Fistulotomy is an effective, minimally invasive approach for treating complex anoscrotal fistulas. It addresses the dual challenge of ensuring fistula closure while preserving sphincter integrity. As experience and technology advance, DLPF may become a standard in the armamentarium against complex perianal fistulas.

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