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Dr. Ashwin Porwal
Consultant Colorectal Surgeon & Founder, Healing Hands Clinic, Pune, Maharashtra, India

Dr. Paresh Gandhi
Consultant Surgeon, Healing Hands Clinic, Pune, Maharashtra, India

Dr. Deepak Kulkarni
Consultant Proctologist and Enterologist, Healing Hands Clinic, Pune, Maharashtra, India

Dr. Swapna S Kadam
Professor, Department of Community Medicine, MMIMSR, MMU, Ambala, Haryana, India

Corresponding Author:
Dr. Ashwin Porwal
Consultant Colorectal Surgeon & Founder, Healing Hands Clinic, Pune, Maharashtra, India

Complex Anoscrotal fistula in an adult treated with DLPL technique

Dr. Ashwin Porwal, Dr. Paresh Gandhi, Dr. Deepak Kulkarni, Dr. Swapna S Kadam

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Abstract
Ano-scrotal fistula is an uncommon condition involving an epithelialised tract between the anal canal and scrotal wall. It is more commonly seen as a congenital phenomenon in the paediatric population, in adults it can result from sexual-transmitted diseases (Gonorrhea urethritis), tuberculosis, shistosomiasis, perianal actinomycosis, Crohn disease, anorectal malformation.
Complex anal fistulas, unlike simple fistulas, are more difficult to treat because fistulotomy would predictably result in incontinence.
We present the case of a man aged 35 years who developed a complex recurrent anoscrotal fistula with multiple scrotal opening and internal opening at 12 o clock position. Patient was successfully treated with DLPL i.e. Distal Laser Proximal Ligation. We present for the first time a rare anoscrotal fistula in an adult treated with DLPL technique. Distal Laser proximal Ligation (DLPL) is a novel technique innovated by Author for complex scrotal fistulas.

Keywords: Dysphagia, retroperitoneum, growth, intussusception

Introduction
Sinuses and fistulae occurring in the scrotum are recognized but uncommon occurrences. Urethroperineal or scrotal fistula is a complication linked with periurethral abscesses [1]. Occasionally, anal fistulas can even extend into the scrotum, causing pain, swelling, redness, and discharge of pus from the outer opening (secondary orifice) of the fistula [2]. While this presentation may initially resemble acute scrotal conditions, careful palpation reveals the anal fistulous tract connecting the outer opening in the scrotum to the inner opening (primary orifice) in the anal canal. The commonly used Goodsall's rule for predicting anal fistula trajectory doesn't apply to long-tract anterior fistulas, including those with scrotal extension [3, 4]. There's a lack of comprehensive guidance on managing anal fistulas with scrotal extension, including suitable operative treatments [2]. This case study showcases the successful use of the DLPL technique in treating an ano scrotal fistula.

Case Report
A 35-year-old married male, employed as a software engineer, presented with significant complaints including pus discharge and pain in the anal region, as well as a boil in the perianal area. The patient had been symptom-free until a year and a half prior, when he began experiencing a gradual onset of pain and discharge. In April 2016, he underwent an Incision and Drainage (I&D) procedure due to his condition. However, his symptoms resurfaced, leading to a subsequent operation on September 19, 2016, which unfortunately failed to yield any improvement. Consequently, he sought medical assistance at our medical facility.
Upon examination, the patient displayed no noteworthy concerns such as constipation or fever. His vital signs, including pulse and blood pressure, were within normal ranges. There was no evidence of systemic conditions such as diabetes mellitus or tuberculosis, and he had no history of smoking, alcohol consumption, or extramarital exposures.
The diagnosis rendered was a complex recurrent Ano scrotal fistula characterized by multiple openings in the scrotal area and an internal opening positioned at 12 o'clock, near the urethral region. Routine tests revealed a hemoglobin level of 14.5 gm%, a WBC count of 6100/mm3, and adequate platelet counts, all of which were within the normal range. Random Blood Sugar Level (BSL) was measured at 97, and creatinine levels were at 0.9%. Renal function tests produced results within the normal limits, and the HIV test yielded negative

results. No palpable lymph nodes were detected during the examination. Ultrasonography did not uncover any abnormalities in the urinary tract, genitals, epididymis, or testes.

The patient's treatment involved a procedure known as Distal Laser Proximal Ligation (DLPL), an innovative technique developed by the Author. DLPL was carried out under spinal anesthesia with the patient positioned in lithotomy. The steps of the procedure were as follows:

The internal opening was identified through per rectal examination, and the external opening was located by tracing the tract via palpation. This step also included checking for an Intersphincteric abscess and excluding the possibility of a Rectal abscess.

An incision was made in the superficial external sphincter to remove the internal opening. The Intersphincteric abscess was excised, utilizing a 1470nm bare tip fibre. The fistula tract was probed through the external opening, or alternatively flushed with normal saline, to precisely pinpoint the location of the fistula opening within the sphincter muscle. Thorough debridement of the fistula tract was carried out to ensure effective cleaning, followed by a saline flush.

Laser ablation using a 1470nm Diode laser equipped with a Radial Fibre was performed on the fistula tract. This involved delivering 100 Joules of continuous energy from the internal opening to the external opening. The internal opening was treated using the 1470nm bare tip diode laser, delivering around 100 Joules of energy. This step also included widening the external opening for better drainage. The internal opening defect within the sphincter muscles was closed using a Uro needle.

Hemostasis was achieved, and both wounds were left open intentionally to facilitate drainage. To seal the fistula tract, a purse string suture with 2-0 monocryl was used to close the internal opening. After ensuring hemostasis and completing cleaning and dressing, the procedure concluded without any complications. The patient's condition remained stable, and he was transferred to the recovery area.

Follow-up-

A follow-up on the fourth day involved palpating the tract to drain serous collection through the external opening. The Intersphincteric space was flushed with betadine.

A second follow-up took place two weeks later, following similar steps as the first, while also assessing for any collections in the Intersphincteric space or fistula tract.

During the third follow-up, one month after the procedure, debridement of hyper granulation at the internal opening level was performed. By the eighth week, the wound had successfully healed. Subsequent follow-ups at three months and beyond ensured the patient's healing progress and monitored the absence of complaints or recurrence.

For nearly a year, the patient has maintained regular follow-up appointments and Rema good health without any recurrence or complaints.

Discussion

Fistula in ano, an inflammatory condition impacting the perianal region and adjacent structures, contributes notably to morbidity [1]. This condition is relatively rare, occurring in approximately 0.01% of cases. It predominantly afflicts young males, displaying a male-to-female ratio of 2:1 [5, 6]. While discharge is the prevailing symptom, presenting in 65% of cases, localized pain due to inflammation is also frequent [2].

The management of perianal fistulas often necessitates surgical intervention. However, there exists a noteworthy rate of recurrence [3]. The success of surgical outcomes hinges on meticulous preoperative evaluation of the primary fistulous pathway's trajectory and any associated secondary extensions or abscesses [4].

In the majority of instances, the external openings of perianal fistulas are situated within 2.5 cm of the anal verge. Instances of anal fistulas extending to the scrotum are rare [5]. Such occurrences are linked to inflammatory bowel diseases, particularly Crohn's disease, and infrequently to ulcerative colitis [6]. Scrotal involvement in the absence of concurrent inflammatory bowel disease is exceptionally uncommon and scarcely documented [5].

Anoscrotal fistulas can arise from sexually transmitted infections (e.g., gonorrhea urethritis), tuberculosis, shistosomiasis, perianal actinomycosis, Crohn's disease, and anorectal malformation. Manifesting as scrotal discharge or sinus, their clinical presentation is distinctive [7].

Effective management requires surgical intervention to address the underlying cause and excise the fistulous tract. Complex anal fistulas are those for which simple fistulotomy would compromise continence [8, 9]. An alternative therapy preserving sphincter muscles involves the use of fibrin glue [9]. Contemporary technology offers various procedures, each with its inherent limitations. DLPL, a minimally invasive technique, is sphincter-preserving, relatively easy to learn, and perform.

Fig 1: Pre-Operative

Fig 2: Post-Operative

Fig 3, 4: Fully healed

Conclusion

Managing conditions like Ano scrotal fistula, known for complexity due to septic foci in inter sphincteric space, requires meticulous treatment. Surgical intervention for Complex Ano scrotal fistula should prioritize removing all septic foci, preserving the sphincter, using minimally invasive techniques to prevent recurrence. Eliminating septic foci through laser ablation aids healing, with DLPL procedure recommended for recurrent complex fistulas, offering effective, recurrence-free results. DLPL, an easily learnable technique, presents an innovative approach for surgeons dealing with rare cases in routine practice.

Conflict of Interest

Not available

Financial Support

Not available

References

1. Bose A, Sharma S, Singh J, Chahal HS. Fistula in ano presenting as postcoital scrotal discharge. J Med Sci 2015;35(4):173-5
2. Araki Y, Kagawa R, Yasui H, Tomoi M. Rules for anal fistulas with scrotal extension. 2017;1(1):22-28. DOI https://doi.org/10.23922/jarc.2016-005)
3. Cirocco WC, Reilly JC. Challenging the predictive accuracy of Goodsall's rule for anal fistulas. Dis Colon Rectum. 1992 Jun;35(6):537-42.
4. Shindhe PS. Management of rare, low anal anterior fistula exception to Goodsall's rule with Ksarasutra. Anc. Sci. Life. 2014 JanMar;33(3):182-5.).
5. Alabiso ME, Iasiello F, Pellino G, *et al*., 3D-EAUS and MRI in the Activity of Anal Fistulas in Crohn's Disease, Gastroenterology Research and Practice, 2016, Article ID 1895694, 8 pages; c2016. https://doi.org/10.1155/2016/1895694.,
6. Sun MRM, Smith MP, Kane RA. Current techniques in imaging of fistula in Ano: Three-dimensional endoanal ultrasound and magnetic resonance imaging, Seminars in Ultrasound, CT and MRI. 2008;29(6):454–471.
7. http://dx.doi.org/10.1594/ecr2016/C-1269
8. Parks AG, Gordon PH, Hardcastle JE. A classification of fistula-in-ano. Br. J. Surg. 1976;63(1):1-12.
9. Damin Daniel C, Rosito Mário A, Contu Paulo C, Cláudio T. Fibrin glue in the management of complex anal fistula. Arq. Gastroenterol. [Internet]. 2009 Dec [cited 2018 Sep 07];46(4):300-303. Available from: http://dx.doi.org/10.1590/S0004-28032009000400010.8,9

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