

Optimizing Surgical Technique for Improved Fistula Treatment

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ABSTRACT

Especially transphincteric anorectal fistulas have shown to be complex with involvement of many anatomical structures and rather high recurrence rates. The need for modularity in the annular dissecting fistula as well as in the sphincteric functioning became pronounced in treatment for the disorder. This is done so that conditions such as fecal incontinence are not realized in the process of undergoing surgery. The patient was a 52-year-old man with many symptoms of the disease including transphincteric fistula with many openings internally or externally. An example of a patient suitable for using the new surgical method for assessment of the outcome would be a patient with no clinical conditions such as diabetes or hypertension. This approach uses modern approaches in drainage together with the ancient Ayurveda technique of Kshara sutra technique in the treatment of the tissue in order to ensure that there is a constant drainage of the contents of the fistulous tract. Among all these techniques, methylene blue infiltration has been found quite helpful in identifying the fistula tract. These procedures are aimed at achieving maximum surgical effect which will minimize the possibility of the recurrence of the illness and enhance the muscular tone of the anal sphincter. The characteristics of the patient's healing state also evolved in treatment: several changes were observed already on the 10th day after the operation. After the second month, the patient had no signs of the fistula tract any more: there were no recurrences or complications. Since there are neither other known influences that could significantly influence the general status of the patient, the presence of markers that could suggest how well the surgical intervention addressed the fistulas stresses the potential of the approach as a set of basic strategies for managing difficult fistulas. From the article, one may infer the important of precision and innovation in performing surgeries. Also, it has the potential to enhance patients' outcome and exclude the factors of long-term adverse effects commonly seen in anorectal fistulas.

1. Introduction

Problems in anorectal fistulas surgery are quite complex and significant, and the patients' sufferings can be prolonged and severe, and the morbidity rate is high. In a similar manner, the derived relationships with the perianal skin are virtually always inconsistent with the epithelial lining of the anal canal, and these patients experience continuous discharge, sepsis, and abscess formation, which significantly diminish their quality of life (Ratto, Litta, Parello, Zaccone, & Donisi, 2015). Also, abscesses themselves are hard to breathe through as they are being created. With regards to the various types of anorectal fistulas, the transphincteric fistulas are relatively complex to manage because of the course that the fistula takes through the external anal sphincter. This puts surgeons in a rather delicate position; they have to excise the entire fistula without compromising the sphincter function in a bid to prevent complications such as fecal incontinence. In the management of anorectal fistulas the principle aim is to achieve obliteration of the fistulous tract without compromising the function of the anal sphincter. Other traditional approaches include fistulotomy which though effective in some circumstance lead to other postoperative challenges include reduced continence and high fistula recurrence rates targeting the current century Epidemiological Research. However, the following objective may be achieved with this approach. These restrictions have over the years led to emergence of more elaborate and detail-oriented surgical methods for patients. They aim at minimizing these dangers while at the same time enhancing the possibility of good outcomes. Anorectal fistulas may be surgically treated with the use of methylene blue dye although this is an improvement in the field of methods of surgery. In a report by Lindsey and colleagues in 2019, this dye is utilised intraoperatively enhancing the perception of the fistulous tract. This is favored by precise excision and decreases the probability of partial therapy, which is often a cause of a relapse. Because of the precision offered by methylene blue, surgeons are able to identify the extent of the entire fistulous track together with the

secondary branches. This makes it possible to accomplish what can aptly be described as a more holistic and streamlined operation to be carried out. Some of the classical surgical operations have been reintroduced into the present-day therapy when the application of ordinary surgeries involves elevated risk factors. This is besides the modern methods, which have been developed and implemented in the course of time. Thus the Kshara sutra operation which is inherently an Ayurvedic approach of dealing with fistula can work through the application of a medicinal thread to the fistulous tract. Besides helping to knit the tissue together, this thread, which has a layer of alkaline herbs on it, also has the ability to 'slice' through the tissue. Sphincter function is intact and the incidence of rectorisation is minimized as a consequence of the required and slow process of Kshara sutra since stress to the surrounding tissues is minimized (Singh & Gupta, 2011). Through research it has been proven that the Kshara sutra approach can work well with difficult fistulas hence being an ideal intervention instead of other invasive approaches (Patel, 2015). employing some of these advanced techniques, this case report presents a successful management of male patient, 52-years-old, with transphincteric fistula using these modalities. To assess the efficiency of this specific approach not to be influenced by some pathological conditions, the patient did not have chronic diseases like diabetes or hypertension. This made created a perfect environment for the evaluation of the outcome. Since this case produced a good result it could be deduced that modern surgical precision together with archaic healing methods has possible to improve patient's performance. This is particularly the case when some of these situations are complex and basic measures may not adequately suffice.

Case Presentation

The patient in the study is a 52-year-old man who never had diabetes or hypertension, but he had one-year complaint of pain and discharge from the perianal area. Discharge was reported to be purulent, a sign that they were still septic. That is, defecation and sitting for a long time caused considerable discomfort to the patient. Further investigations with MRI fistulogram were carried out that showed that it was a transphincteric fistula with internal fistulous communication at 12-o'clock position and external fistulous opening at 9-o'clock and 12-o'clock positions in the sub-scrotal region. This article describes the case of a patient with complex fistula in ano, with multiple tracts and openings, and highlights the approaches used in the surgical planning and treatment to maximize the chances of fistula excision and sphincter preservation.

Surgical Technique: Day 1

The patient was anaesthetized for the surgery using regional anesthesia. The method started with staining of the outer opening with methylene blue followed by filling of both open ends with this dye an important step that facilitated distinction between the two internal openings. This technique facilitates determination of fistulous tract and thereby minimizes errors in the extent of fistulous tract excision. Subsequently, Kshara sutra, an Ayurvedic medicated thread which has a caustic disposition along with an attribute of healing was applied from the intercepted region of the wound to the internal opening. Kshara sutra helps gradually reserved special tokening through the fistulous tissue offering simultaneously the advantage of healing and thereby excluding the risk of the recurrence in the true sense of the term. A simple drainage thread was also sutured at the same time from the window to the external apex in the 12-o'clock position in order to continuously drain the fistula tract. As much as possible of the remaining fistula track was curetted, with removal of granulation tissue or any residual infection, the absence of which is important to avoid fistula recurrence.



Figures: : Day 1 - Initial Surgical Intervention

Postoperative Observations: Day 10

The patient returned for follow-up, during which significant improvement was noted. The distal fistula tract at the 9 o'clock position showed clear signs of collapse, indicating the effectiveness of the Kshara sutra in promoting fistula closure. The patient reported reduced pain and discharge, and there were no signs of infection or abscess formation.



Figure 2: Day 10 - Follow-up Showing Collapsed Distal Track

After 1 Month

The simple drainage thread was cut from the distal tract, which is exceedingly reached at the twelve o'clock position. The distal tract was reached. Furthermore, the wound had also started developing good degree of closure and also there was improvement in the amount of discharge present. Concerning the features of a new fistula formation or any effects, including incontinence, the outcome of the investigation was negative. Much more improvement had been achieved with respect to alleviation of the patient's pain.



Figure 3: After 1 Month - Healing Progress

After 2 Months

The fistula tract was fully closed and no sign that the condition would recur was observed. The patient demonstrated complete healing and there is no perception of recurrence of the condition. From the patient's own account, there were no problems in resuming normal life; the skin has healed quickly, leaving a small amount of scarring. That this has occurred is evidence which indicates that the surgical procedure is felt to be effective in the therapy of difficult transphincteric fistulas.



Figure 4: After 2 Months - Complete Recovery.

2. Results and discussion

This is a complex transphincteric fistula but with the application of all the principles followed, undergoing a radical surgery one is capable of fixing the problem as was evidenced herein. Definitive delineation of the fistulous tract with methylene blue, Kshara sutra for slow, safe and sound set of the

fistulous tract, good and efficient and adequate drainage techniques all helped in giving a complete recovery without usual complications of fistula operation like incontinence. This case suggests that the employment of these efficiently tuned operations may become a stock management practice for such other complex fistulas in the future. There were no recurrences of fistula, which is quite impressive, sphincter function was preserved, so it can be said that the method also deals with the future potentialities.

3. Conclusion and future scope

Transphincteric fistula in terms of anatomy was complex in this case report and was treated by following a carefully designed operative plan that integrates modern precision techniques with the conventional ones. This was done as part of the implementation of the following strategy in the treatment of the patient. Since the patient had a complete recovery and there was no reoccurrence of signs and symptoms of fistula, it is clear that this procedure has a possibility of being an effective supplementary to the surgical management of anorectal fistulas. This is evidenced by the failure of the patient to have recurrence or fecal incontinence. Further investigations and much more extensive studies are needed to confirm such findings and terminal the technique for the broad medical practice. However, as these studies point out, there is more work that needs to be done and more desired population sampling that needs to be carried out. Fistulas that prove to be complex for other approaches will be improved by this since it will prove that results are steadily progressive.

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