STUDY OF POSTOPERATIVE OUTCOME OF LOCAL ANAESTHESIA TO SPINAL ANAESTHESIA IN THE TREATMENT OF FISSURE-IN-ANO IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Anal fissures are one of the most common and distressing problems faced by patients presenting to the Surgical Outpatient Department. The condition is relatively simple to treat with rewarding results. However, disastrous consequences can occur due to complications relating to the disease process or even to surgical treatment for the same, ensuing lifelong distress for the patient. The standard algorithm for anal fissure therapy has traditionally consisted of a trial of fibre supplementation, sitz baths and topical analgesics. If the pain is intolerable or if conservative care fails, surgery is performed. The use of local anesthetics for peri-anal operations has not been investigated at large and there are not many data available for the same. Hence, there is a need to analyse the outcomes of preferring local anaesthesia to spinal anaesthesia in the treatment of Fissure-In-Ano.

KEYWORDS

Lateral Internal Sphincterotomy, Local anaesthesia, Spinal Anaesthesia, Fissure-in-Ano, Visual Analogue Scale (VAS).

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INTRODUCTION

Anal fissure by definition is a breach in the anal epithelium overlying the internal anal sphincter commencing just below the dentate line. The anal canal begins where the rectal ampulla suddenly narrows (Anorectal junction), passing down and backwards to the anus and ends at anal verge.⁽¹⁾ Fissures often occur as a result of chronic constipation, passage of a hard stool tearing the anal mucosa. Most anal fissures are located in the posterior midline with 10% to 15% occurring anteriorly.

The great majority of fissures occur in the posterior midline, although anterior midline fissures are seen in 25% of affected women and 8% of affected men. About 3% of patients have both anterior and posterior fissures.⁽²⁾ With the passage of time, chronic fissures develop thickened skin margins and fibres of the Internal Anal Sphincter (IAS) become visible at the fissure's base. Anal fissure is a common disorder, but its exact incidence is unknown.

The clinical hallmark of anal fissure is pain during and especially after defecation. The pain is often severe enough for patients to dread or even attempt to avoid bowel movements altogether. Fissure patients can also experience rectal bleeding, usually consisting of small quantities of fresh red blood.

Surgical therapy traditionally has been recommended for Fissure-In-Ano that have failed medical therapy and lateral

sphincterotomy under spinal anaesthesia is the procedure of choice. Lateral internal sphincterotomy has been validated in several studies in showing excellent results with respect to both pain control as well as fissure healing. LIS can be performed using either an open (Exposing and dividing the IAS) or closed (Dividing the IAS via a small stab wound) technique.⁽³⁾

Lateral sphincterotomy is most frequently performed under spinal anaesthesia, as local infiltration of the perianal region is painful. With spinal anaesthesia, patients are slower to mobilize, which further reduces the prospect of lateral sphincterotomy being carried out as a day-case procedure. If local anesthetic could be injected less painfully, then patients may be persuaded to undergo lateral sphincterotomy as a day case under local anaesthesia.

OBJECTIVE OF THE STUDY

To compare post-operative outcomes of local anaesthesia to spinal anaesthesia in Tertiary Care Hospital.

MATERIALS AND METHODS

All cases that were clinically diagnosed with Fissure-In-Ano in the Department of Surgery at our Medical College from June 2012 - June 2014 were selected for the study. Ethical clearance was obtained from the Hospital Ethical Committee for conducting the study prior to the study.

A thorough history was taken and a detailed clinical examination done, which was entered in a proforma. Informed consent for participating in the study by the principal investigator was taken from the patients. Every alternate patient who presented with Fissure-In-Ano was taken up for lateral sphincterotomy under local anaesthesia after application of topical anaesthetic cream (Lidocaine+prilocaine) while the remaining cases underwent lateral sphincterotomy under spinal anaesthesia after necessary investigations.

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All patients were given a proforma to collect data on pain experienced during injection of local anaesthetic, post-operative pain using VAS scale, bleeding, nausea/vomiting, quality of defecation and duration of hospital stay. Follow-ups on patients were done after one week and one month post surgery. This data along with type of surgery were recorded and final outcome was evaluated. Patients who underwent surgery under LA are grouped under Group L and those who were subjected to SA under Group S.

RESULTS

Seventy two cases were operated for Fissure-In-Ano, out of which 36 cases were done under spinal anaesthesia and 36 cases were done under local anaesthesia. Duration of surgery for 72% of patients in group L was less than 35 minutes, whereas 78% of patients in group S was more than 45 minutes; 25% of patients of group L rated 8/10 VAS score for pain, whereas 33% patients of group S rated 6/10 VAS score for pain.

VAS score taken 6 hours post-surgery showed majority of patients who underwent surgery under LA had a score between 1 to 3, while majority of patients who underwent surgery under SA scored between 3 to 6; 7(19.44%) patients in group L and 5(13.88%) patients in Group S complained of post-operative bleeding. Out of the 36 cases in group L, only 1(2.7%) complained of nausea and vomiting, whereas 6(16.6%) patients of 36 in group S complained of nausea/vomiting post surgery.

Out of 36 patients in group L, 3(8.3%) were constipated while rest 33 had normal quality of defecation post surgery; 6(16.6%) cases in group S were constipated and rest 30 had normal bowels. Most of the patients (55.5%) in group L were discharged in 0 to 2 days, while in group S most of the patients (83.3%) were discharged in 3 to 5 days. Two patients in group L (5.5%) and 5 patients in group S (13.8%) were discharged more than 6 days post surgery.

DISCUSSION

Fissure-In-Ano is an extremely common presentation in the Surgical Department, where patients present with hematochezia, intense and painful anal spasm lasting for several hours after bowel movement. Surgical therapy traditionally has been recommended for Fissure-In-Ano that have failed medical therapy and lateral sphincterotomy under spinal anaesthesia is the procedure of choice. At present there are few attempts to perform lateral sphincterotomy on an ambulatory basis under local anaesthesia. The surgery preferred at present is internal anal sphincterotomy under spinal anaesthesia or local anaesthesia which results in division of a part of internal sphincter, but leaves external sphincter intact.

Approximately 30% of internal sphincter fibres are divided laterally using open or closed technique.⁴ Complete relief of pain and healing is recorded in 70%-90% of patients.⁵ Intensive functional disorders of adjacent organs are distinctive for the postoperative period.^{6,7} Recurrence occurs in less than 10% of patients.⁸

Lateral internal sphincterotomy has been validated in several studies in showing excellent results with respect to both pain control as well as fissure healing. Lateral sphincterotomy is most frequently performed under spinal anaesthesia, as local infiltration of the perianal region is

painful. With spinal anaesthesia patients are slower to mobilize, which further reduces the prospect of lateral sphincterotomy being carried out as a day-case procedure. If local anesthetic could be injected less painfully, then patients may be persuaded to undergo lateral sphincterotomy as a day case under local anaesthesia. By using topical anaesthesia before infiltration of an anesthetic, intraoperative pain is minimized and this may help local anaesthesia gain wider acceptance among patients. In the present study, 72 patients who presented with Fissure-In-Ano were posted for lateral sphincterotomy.

The patients in both groups were comparable with respect to the demographic characteristics. Both LA and SA in LIS were found to be comparable in terms of needle pain at the time of anesthetic infiltration. The duration of time taken for surgery was significantly lower in group L. Post-operative pain was found to be significantly lower in group L as when compared to Group S. SM Towliat Kashani, et al. found a significant difference in pain score related to needle pain on performing operation on VAS basis between Group L and S. It indicated that the needle pain of spinal anaesthesia was less than local anesthetic injection.⁽⁹⁾

The duration of time taken for surgery in the present study was significantly lower in group L (35 mins) as compared to group S (47.36). Khaled Ajarma, et al. found the mean time in the operating room was 25 minutes in the LA group and 40 minutes in the SA group and surgery time was 10 minutes in both groups.⁽¹⁰⁾ Post-operative pain was assessed 6 hours post-surgery with the VAS scale.

The present study obtained a significant difference in post-operative pain score in GRP L and GRP S. SM Towliat Kashani, et al. also found a significant difference in postoperative pain score after 6 hours of LIS.⁽⁹⁾ SM Towliat Kashani, et al. found that there was a significant difference in postoperative gastrointestinal symptoms (Nausea and vomiting) in group S in comparison with group L.⁽⁹⁾

In the present study only one patient (2.7%) complained of vomiting, whereas 6 patients (16.6%) out of 36 in group S complained of nausea/vomiting post-surgery. Number of days of hospital stay and recovery time before discharge for patients treated for Fissure-In-Ano with LIS were significantly shorter for those patients undergoing LA than for patients undergoing SA. SM Towliat Kashani, et al. stated that apparently patients who were operated under local anaesthesia were able to go back to work earlier due to less discomfort and pain.⁽⁹⁾

Hence LIS done under LA is found to be comparable to LIS done under SA with lesser post-operative pain, lesser duration of surgery and hospital stay. Hence, it was found that the use of topical and local anesthetic infiltration is a well tolerated and effective form of anaesthesia when used for lateral sphincterotomy as a treatment of anal fissure.

CONCLUSION

Lateral sphincterotomy results in anatomical correction of the aetiological factor of increased sphincter pressure and hence offers complete relief of symptoms and healing of Fissure-In-Ano. Lateral sphincterotomy done under local anaesthesia takes lesser time than lateral internal sphincterotomy done under spinal anaesthesia. Better postoperative pain relief could be accomplished by local anaesthesia in lateral internal sphincterotomy. The use of local infiltration anaesthesia with

prior topical anesthetic application in lateral internal sphincterotomy resulted in lesser complications, shorter hospital stay and lesser expenses, therefore patient acceptance has been excellent when compared to spinal anaesthesia.

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