



EFFECTIVENESS OF CAUDAL EPIDURAL ANAESTHESIA IN ANORECTAL SURGERY.

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ABSTRACT... To assess the effectiveness of caudal epidural anaesthesia in patients with anorectal surgical condition. **Study Design:** Prospective randomized study. **Setting:** Department of Surgery, Jinnah Hospital, Lahore. **Period:** 1st August 2016 to 31st July 2017. **Materials and Methods:** One hundred and eighty patients with general anorectal surgical conditions were recruited in this study with their consent. Patients were subject to surgery planned beneath caudal block. **Results:** One hundred and fifty eight patients (87%) satisfy with the technique of anaesthesia and one hundred sixty six (92.22%) patients demonstrate satisfaction with the postoperative pain control. One hundred and fifty two patients (84.44%) were resisted with pre-operative information and 158 (87%) patients show their consent to select this kind of anaesthesia if needed again. In 20 patients there was block failure caused about 11.11% failure rate. **Conclusion:** Satisfactory anaesthesia, minimal requirements, cost effectiveness and high patients acceptability make caudal anaesthesia a suitable choice for trivial and surgery.

Key words: Anaesthesia, Anorectal Surgery, Caudal Anaesthesia, High Patients Acceptability, Satisfactory Anaesthesia.

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INTRODUCTION

Local anaesthesia is frequent the method of selection for anal surgery but caudal anaesthesia is not well liked due to the increased failure rate as compared to spinal and epidural anaesthesia. For minor anorectal surgery, caudal anaesthesia is applicable.^{1,2}

Caudal block involve inserting needle through sacral hiatus for medication into epidural space. This approach is also popular in managing patients with chronic pain conditions.³⁻⁵

It was firstly introduce as a landmark based, blind method. Above 96% successful rate was found in children with this blind technique.¹ CA(caudal anaesthesia) is commonly used in children.⁶ In different settings caudal anaesthesia is performed in adult patients whom treating anorectal surgery. The safety and efficacy of caudal block for parineal and sacral methods have been resulted in adult patients.⁷ Many of studies shows that gender may

be an important factor for examining anaesthetic fulfillment importantly for morphine.⁸

Minor anorectal disorders are common in adults in western countries. In USA, the frequency of hemorrhoids and other anorectal disorders in adult is 4% to 5% and approximately 10% of incidences required surgical treatment.⁹ In 1986, L.E.Smith reported that 90% of anorectal surgeries is performed on the basis of ambulatory.¹⁰

Anorectal surgery need deep anaesthesia because the zone acquire many of nerve supply and is reflexogenic.¹¹ Many of techniches regarding anaesthesia is performing worldwide such as general, caudal and spinal anaesthesia.^{12,13} Caudal anaesthesia was firstly performed in Paris 1901. The method was introduced in the pediatric surgery department and since from 2000 it is successfully performing in adult anorectal surgery.¹⁴

Recent study was conducted to evaluate the effectiveness of caudal epidural anaesthesia in patients with anorectal surgical condition.

MATERIALS AND METHODS

This prospective randomized study was conducted at Department of Surgery, Jinnah Hospital, Lahore from 1st August 2016 to 31st July 2017. One hundred and eighty patients were recruited with general anorectal surgical conditions during the period of this study. Under caudal block, surgery was planned in all patients. With standard 20-gauge needle established the caudal anaesthesia with prone positioned patients. The general anorectal conditions were included in the study like anal fissure, perianal abscesses, fistula and hemorrhoids. With standard hypodermic needle 20g established the caudal anaesthesia with prone positioned patients. Identified the sacral hiatus and inserted needle in sacral canal and instilled the approximately 25ml of 0.25% bupivacaine injection. The required surgery process was done after thirty minutes. The data was entered and analyzed in SPSS-20.

RESULTS

There were 144 (80%) male patients and 36 (20%) female patients. The range of age was 16 years to 76 years, the mean age was 44 ± 6.4 (Table-I). Procedure carried out lateral sphincterotomy 56, haemorrhoidectomy 66, perianal abscess drainage 20 and fistulectomy 38 (Table-II). On the same evening all but twenty patients were discharge with post-operative stay, 6 hours and 13 minutes. There was anaesthesia failure in twenty 20 patients out of which general anaesthesia given to twelve 12 patients and completed procedure after anaesthesia augmentation in 8 patients with posterior perineal block. The feedback of patients regarding technique of caudal block anaesthesia, pre-operative analgesia as well as their satisfaction regarding pre-operative information was also obtained as shown in Table-III.

Gender	No.	%
Male	144	80
Female	36	20

Table-I. Distribution of gender (n = 180)

Gender	=N	%
Lateral Sphincterotomy	56	31.11
Haemorrhoidectomy	66	36.67
Perianal Abscess Drainage	20	11.11
Fistulectomy	38	21.11

Table-II. Procedure performed (n=180)

Feedback	Yes	No
Is technique of caudal block anaesthesia satisfying.	158 (87%)	22 (13%)
Is satisfying with pre-operative analgesia.	166 (92.22%)	14 (7.78%)
Are satisfying with pre-operative information.	152 (84.44%)	28 (15.56%)
If needed again, will select caudal anaesthesia.	158 (87%)	22 (13%)

Table-III. Patients feedback (n = 180)

DISCUSSION

Caudal anaesthesia is inexpensive and easy. In 1990, Sicard and Cathelin firstly described caudal anaesthesia is promptly applicable to slight anorectal surgery. Until now, there is hesitation to execute rectal and anal procedure under caudal anaesthesia of fright of pre and post operative chronic pain.^{18,19} This stance has been changed slowly because of good control of pain by longish act anaesthetic drug.²⁰ This anaesthesia technique can successfully deal with more than 80% of anorectal surgical conditions with economy and better expediency without scarifying ease and safety.^{21,22}

There are many advantages offered by local anaesthesia i.e. decrease the recovery time of patients, limit post-anaesthesia nursing care and decreases the quantity of analgesics needed in the instant postoperative period.²² Caudal epidural anaesthesia is very easy to execute and is effective and safe. The success depends on accurate selection of patients. The rate of success is better in adult patients. With the age passes, the caudal epidural space fat becomes fibrosed and much organized therefore correct dissipation of fluid is not possible sometimes. Due to this reason the rate of failure is minor high in caudal block as compare to saddle/encumber anaesthesia however, it has got different advantage of good quality and longish period of

post-operative analgesia.^{3,22} The average period of epidural analgesia with 0.25 % bupivacaine was 8 hours to 12 hours in a study done by Miles and Dunkley²³ which is little higher compare to 4 to 8.5 hours in this study. Gabrielli and colleagues²⁴ observed one hundred and ninety three patients even long period of analgesia in their study. The patients with satisfactory anaesthetic effect was better sphincter relaxation and was experience least uneasiness.

In the light of feedback in response to questionnaire, 88.88% patients satisfied from preoperative information and patients showing their readiness to select this kind of anaesthesia, if required again which is according to the study of Thompson¹⁹ of 129 patients in which they believed that they received sufficient information were 86%. Their conclusion that patients toleration and adequacy remain high and with the high degree of patients contentment / satisfaction day case proctology can be performed which was same as in other international studies.^{24-25,26} The decrease of patients hospital stay treat for anorectal surgical condition is an attractive substitute that decreases the cost without increased the morbidity. Furthermore, it is cost effective, safe and decreases the load of work on elective list.

CONCLUSION

Satisfactory anaesthesia, minimal requirements, cost effectiveness and high patients acceptability make caudal anaesthesia a suitable choice for trivial and surgery. Further, it is safe and decreases the load of work on elective list.



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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Sajid Malik	Data collection & writing of manuscript.	
2	Shahid Hussain Mirani	Writing of manuscript and compiling results.	
3	Dileep Kumar	Statistical analysis & guidance in writing the manuscript.	