

Epidemiological Study of Various Surgeries Performed under Spinal Anesthesia in a Secondary Health Care Institution: A Retrospective Study

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ABSTRACT

Developing countries like India have a greater shortage of medical equipments and healthcare workers. Hence surgery and anesthesia related services are also poor and they are not able to meet the demand of the population. So, institutions at peripheral level play a vital role in providing surgery and anesthesia related services to the patients. Majority of lower abdominal surgeries are performed under spinal anesthesia, as subarachnoid block (SAB) is cost effective, easy to administer, denser block, rapid in action and provides early ambulation to the patient. This study was conducted to find out the prevalence of various surgical operations performed under spinal anesthesia in a secondary health care institution. This retrospective observational study was conducted over a duration of one year from January 2019 to December 2019 in Civil Hospital (CH) Nurpur. Data was collected from OT records to see the incidence of various surgeries conducted by different departments under spinal anesthesia. This data was analyzed using numbers and percentages. Maximum surgical procedures were performed by obstetrician [(n=49) (53.8%)] followed by General Surgeon [(n=42)(46.2 %)]. Our findings suggest that LSCS is the most common surgical procedure followed by cholecystectomy and hernioplasty. Major surgical procedures (laparotomies, orthopedic surgeries, neurosurgeries) at our setup are not done owing to lack of infrastructure and manpower; and upgradation of the same is needed.

Keywords: SAB, LSCS, cholecystectomy, hernioplasty.

INTRODUCTION

Developing countries like India have a greater shortage of medical equipments and healthcare workers.¹ Hence surgery and anesthesia related services are also poor and they are not able to meet the demand of the population. So, institutions at peripheral level play a vital role in providing surgery and anesthesia related services to the patients. Globally 28-32% diseases are surgically correctable.^{2,3,4} Anesthesia services are crucial for any surgery. The most common procedures performed by an anesthetist are general anesthesia, spinal anesthesia and peripheral nerve blocks. But majority of lower abdominal surgeries are performed under spinal anesthesia, as subarachnoid block (SAB) is cost effective, easy to administer, denser block, rapid in action and provides early ambulation to the patient.⁵

Epidemiological data regarding different types of surgeries are very important for the determination of community surgical needs. With this aim, we conducted a community based study to find out the prevalence of various surgical operations performed under spinal anesthesia in a secondary health care institution.

MATERIAL AND METHODS

This retrospective observational study was conducted over a duration of one year from January 2019 to December 2019 in Civil Hospital (CH) Nurpur. CH Nurpur is a secondary health care institution.

Surgeries under spinal anesthesia were conducted in the field of General Surgery, Obstetrics and Gynecology at CH Nurpur. There is a single operation theater (OT) in the hospital with one operating table which is shared by all specialties on day to day basis. Both elective as well as emergency procedures are performed in this operation theater. Mindray WATO EX 20 anesthesia machine is present in our OT. Data was collected from OT records to see the incidence of various surgeries conducted by different departments under spinal anesthesia. This data was analyzed using numbers and percentages.

RESULTS

The present study was a retrospective observational study conducted at secondary health care institution. In our study, 74.8 % of patients were female while remaining 25.2 % patients were male (ranging from 6 years to 80 years). There

were 91 major surgeries performed under sub arachnoid block (SAB) over the duration of 1 year. Out of 91 surgeries, 17 (19%) were operated in emergency and rest 74 (81%) was elective procedures. Maximum surgical procedures were performed by obstetrician [(n=49)(53.8%)] followed by General Surgeon [(n=42)(46.2 %)]. In our institution only lower segment cesarean section (LSCS) were performed by obstetrician. Out of total 49 LSCS performed in OT, 39 (79.6 %) were elective procedures whereas 10 (20.4%) were conducted in emergency.

General Surgery department had conducted 42 surgeries under SAB. Cholelithiasis (13) was the most common indication for the surgery, for which open cholecystectomy was performed. Other surgical procedures performed under SAB were open appendectomy, Hernioplasty, Herniotomy, fistulectomy and incision and drainage of abscess.

Table1: Case distribution.

Specialty	Surgery	Elective	Emergency	Total
Obstetrics (49)	LSCS	39	10	49
General surgery (42)	Open Cholecystectomy	13	0	13
	Mesh Hernioplasty	13	0	13
	Open appendectomy	2	5	7
	Fistulectomy	2	2	4
	Herniotomy	3	0	3
	Incision and drainage of abscess	2	0	2
Total		74	17	91

DISCUSSION

In our study, the most common surgery performed under SAB was caesarean section (53.8%).

Previously, 34.4 % prevalence of caesarean section has been documented by Bhasin et al in their study conducted in east Delhi.⁶ These differences in the relative percentage could be due to demographic variations.

Preference for SAB at our set up is due to its relative safety, ease of administration and cost effectiveness. Apart from that, major abdominal surgeries and emergency neurosurgical and orthopedic procedures at our set up are not done due to lack of concerned specialist (neurosurgeon, orthopedician, radiologist), blood bank and

postoperative intensive care unit. To cater to the increasing demands of the people, upgradation of infrastructures as well as man power is the need of the hour.

CONCLUSION

Our findings suggest that LSCS is the most common surgical procedure followed by cholecystectomy and hernioplasty. Major surgical procedures (laparotomies, orthopedic surgeries, neurosurgeries) at our setup are not done owing to lack of infrastructure and manpower; and upgradation of the same is needed.

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