Original Articles

A COMPARISON OF SATISFACTION; SPINAL VERSUS GENERAL ANESTHESIA FOR CESAREAN SECTION

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ABSTRACT

Objective: To compare the patients' satisfaction with spinal and general anesthesia after cesarean section at CMH Lahore.

Study Design: Randomized controlled trials.

Study Setting: The study was conducted at the department of Obstetrics and Gynaecology Combined Military Hospital, Lahore, for 6 months from July to Dec 2011.

Patients and Methods: Total 70 patients were included in the study and randomly divided into two groups of 35 each using random numbers table. All patients between ages of 20-40 years admitted for elective cesarean section and presented for following up at day 5-7 who never had any type of anesthesia in the past. There included in the study patients with complaints of migraine, low backaches, positive history or any other medical disorder were excluded from the study.

Results: A total number of patients included were 70. Out of these selected patients, 35 procedures were carried out under spinal anesthesia and 35 under general anesthesia. Insignificant difference was found in satisfaction level of both the groups (p=0.220). There is significant difference for the future choice between two groups (p<0.001).

Conclusion: Spinal anesthesia provides equal satisfaction for patients of cesarean section than general anesthesia.

Keywords: Cesarean section, Satisfaction, Spinal anesthesia.

INTRODUCTION

Cesarean section (CS) rates have increased dramatically in developed and developing countries alike in the past 30 years[1-3]. Although infant and maternal death rates have been decreasing in Antigua and Barbuda following an increase in CS[3], the procedure is not without risk to mother[4] and child[5]. In developed countries, regional anesthesia, most often spinal anesthesia (SA) rather than general anesthesia (GA) has become the anesthetic technique of choice for women undergoing CS[6-8].

Cesarean section (CS) is one of the most common surgical procedures today. About 20-25% of all birth is by CS[9]. Most of the CS are now performed under (SA) in modern obstetrics as it is technically easier, safe, with short recovery. It allows the patient to remain awake during the procedure, thus relieving anxiety and improving satisfaction and other benefit is the avoidance of infant sedation[10].

We, as health care providers, believe that spinal anesthesia results in a higher quality of anesthesia as compared to general anesthesia[11] but patients who are at the receiving end think differently. Many patients think that SA is a half anesthesia and it leaves low backache. counselling sometimes becomes difficult in such cases. Is spinal anesthesia really dissatisfying in the patients of cesarean section? To answer this question, we conducted this study and our aim was to compare the satisfaction with spinal anesthesia and general anesthesia after cesarean section.

PATIENTS AND METHODS

These randomized controlled trials were carried out in Obs and Gynae department of Combined Military Hospital Lahore (CMH) Lahore from July to Dec 2011. Patients were

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selected from age range 20 to 40 years. Their informed written consent was also taken for inclusion.The patients who had their cesarean section outside the CMH Lahore and came for the post operative visits were excluded.

We selected total 70 patients consecutively and randomly divided them into 2 groups of 35 each using random numbers table. GA group received general anesthesia and SA group received spinal anesthesia for elective cesarean section. Both groups were asked for satisfaction scores. Information were obtained from the patients at 5th-7th post operative day with a questionnaire which was designed like Iowa satisfaction with anesthesia scale (ISAS)[12] but modified by including only positive responses and excluding the negatively worded questions. We asked the patients' responses for the statements, I felt safe during procedure, I was satisfied with my anesthesia care and I would like to have the same anesthesia again.

Criteria for satisfaction: All questions were close ended with only yes and no choices. Subjects who selected yes were included in satisfied group while the subjects with no options were in the dissatisfied group.

Demographic data: Their demographic data (age, education, socio-economic class and parity) was collected using the questionnaire. Age was divided into two age groups (20-30 and 31-40 years), education status was subdivided into below matric and above matric, high and low, socio-economic class, primary or multi gravida.

Statistical analysis: The data was collected, processed and statistically analyzed by excel 2007, where applicable. Descriptive statistics were used to describe the results. Chi-square test was applied for the comparison. *p*-values <0.05 was considered as significant.

RESULTS

Total 70 patients were included in the study and randomly divided into two groups of 35 each i.e GA (n=35) and SA (n=35) (demographic description is given in table-1). In GA groups, 20 (57.15%) patients were between ages of 20 to 30 years while in SA group 22 (62.8%) were between 20 to 30 years (p=0.626).

In GA group, 24 (68.6%) were above matric while in SA group, 20 (57.1%) were above matric (p=0.322).

In GA group, 14(40%) patients belonged to high socio economic class while in SA group, 27 (77.1) patients belonged to high socio economic class (p=0.002).

In GA group, 22 (62.8%) patients were multigravida while in SA group, 19 (54.3%) patients were multigravida (p=0.467). In SA group 19 (54.3%) patients were satisfied and 16 (45.7%) were dissatisfied. In GA group, 24 (68.6%) patients were satisfied and 11 (31.4%) patients were dissatisfied (p=0.220)(Table-2).

Satisfied patients among both groups were analyzed for their future choice of anesthesia. Out of 19 satisfied patients in SA group all the patients 19 (100%) selected spinal anesthesia as their future choice and among 24 satisfied patients in GA group 7 (29.2%) wanted to have the same anesthesia in future while 17 (70.8%) of the patients were not very sure about their next choice. There was significant difference regarding same anesthesia as a future choice between both the groups (p<0.001).

DISCUSSION

Much of the debate surrounding choice of anesthesia during surgery has centered around whether GA is better them SA. This study compared SA with GA in terms of patient satisfaction to establish the advantage of offering spinal anesthesia in women undergoing cesarean section.

In our study no significant difference was found in satisfied and dissatisfied groups for both GA and SA (p-value > 0.05). This is consistent with study of Certakyamanee J and others who also reported equal satisfaction score with general and spinal anesthesia[11]. Sadiqa Batool et al[12], in a national study conducted at CMH Sialkot, compared spinal versus general

anesthesia (SA Vs GA) for the patients undergoing lower segment cesarean section and also reported similar results. There was no significant difference in cesarean section after SA and GA and authors concluded that both types of anesthesia were equally satisfying for the patients[12].

On the other hand Riley ET and colleagues compared spinal and epidural anesthesia for cesarean section and concluded that SA is a better choice and is more cost effective[13].

The increasing role of quality of care in health services provides us incentive to compare the satisfaction rates in two anesthetic techniques for patients having C-Section. Our results supported our initial impression that spinal anesthesia gives better quality and higher satisfaction rates, as 100% of the satisfied patients preferred to have SA in future. Moreover, our results agreed with those of other who have compared SA and GA for C-Section. Although SA causes hypotension and hemodynamic shifts in mothers but can be managed easily with preoperative intravenous fluids and use of ephedrine. Visalypaturas and his colleagues compared the spinal and epidural anesthesia in severe pre eclamptic patients and support the use of SA in severe preeclampsia[14].

Petopoulous G and co-authors recommended that due to differences in acid base status of mother and newborn, SA should be used carefully[15]. In our study majority of the women in SA belonged to high socio economic class and we relate the high number of patients choosing same anesthesia as their future choice to a high level of education and awareness among this satisfied group. No relevant references could be found during literature search to support our findings.

Table-1: Demographic data of the subjects of general anesthesia and spinal anesthesia.

Demographic characteristic		General Anesthesia(GA) (n=35)	Spinal Anesthesia(SA) (n=35)	*p*–value
Age	20-30 Years	20(57.1%)	22(62.8%)	0.626
	31-40 Years	15(42.8%)	13(37.1%)	
Education	<matric	11(31.4%)	15(42.8)	0.322
	>matric	24(68.5%)	20(57.1%)	
Socio-Economic class	High SEC	14(40%)	27(77.7%)	0.002*
	Low SEC	21(60%)	8(22%)	
Parity	Primary gravida	13(37%)	16(46%)	0.467
	Multi gravida	22(62.8%)	19(54%)	

Table-2: A comparison of satisfaction spinal versus general anesthesia for cesarean section.

Satisfaction Level	General Anesthesia(GA) (n=35)	Spinal Anesthesia (SA) (n=35)	*p* - value
Satisfied	24 (68.6 %)	24 (68.6 %)	0.220
Dissatisfied	11 (31.4 %)	11 (31.4 %)	

Limitations

However, the study had its limitations. Firstly, the patient's choice for the type of anesthesia was not sorted preoperatively. Secondly, the satisfaction scores were measured subjectively not objectively and subjective assessment greatly depends upon the outcome especially in obstetrical procedures, like having a live birth or having a son gives higher satisfaction scores.

CONCLUSION

We conclude that spinal anesthesia provides equal satisfaction rate to the patients undergoing cesarean section as compared to the general anesthesia. It is faster to perform, patients are more comfortable and satisfied, but both SA and GA carry their side effects. So apart from patients' choice the health care professional should assess and decide which anesthesia the patient will better tolerate.

As 100% of the satisfied patients in SA group chose the same anesthesia as their future choice, we recommend that choice of anesthesia should be discussed with patients pre-operatively and creating awareness regarding the safety, quality and cost effectiveness of SA will be helpful for the patients to make a safe and satisfying choice for them.

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