Maternal Satisfaction to Epidural and Spinal Anesthesia for Cesarean Section

Wacharin Sindhvananda MD*, Ruenreong Leelanukrom MD*,
Oraluxna Rodanant MD*, Pin Sriprajittichai MD*

**Department of Anesthesiology, Faculty of Medicine, Chulalongkorn University*

Background and Objective : *The differences between epidural (EA) and spinal (SA) anesthesia that can affect maternal satisfaction are the procedures, quality of anesthesia and postoperative events. Dominantly, postoperative events such as postdural puncture headache, pruritus and nausea or vomiting after spinal anesthesia are claimed to be its disadvantages. However, maternal satisfactory perception to theses two techniques has not been revealed. The authors' purpose was to compare maternal satisfaction regarding the techniques and their outcomes between EA and SA by the developed valid and reliable tool.*

Material and Method : *Patients were randomly classified into two groups: epidural (Group E, n=56) and spinal (Group S, n = 58). Epidural and spinal anesthesia were administered with bupivacaine, 20 mL 0.5% with 1: 200,000 epinephrine combined with two doses of 5 mg morphine and hyperbaric bupivacaine 2.2-2.4 mL 0.5% combined with 0.2 mg morphine respectively. Guidelines for treatment of intraoperative and postoperative events, which might be the confounding factors, were set up. Maternal satisfaction was evaluated by the 11-item, qualified, self-administered questionnaire comprised of 4 common factors. The score of 0-10 Visual analog scale was used to access the degree of satisfaction. Trained personnel performed data collections in the post-anesthesia care unit and ward. The means of the factor and total satisfaction scores were compared between the two groups by Mann Whitney U test. A p-value < 0.05 considered significant.*

Results : *There was no statistical difference in the factor scores between the two groups. The total satisfactory score was 89.48 $\pm$ 9.31 and 90.03 $\pm$ 11.26 in Group E and S respectively. No statistical difference of the total satisfaction score was detected.*

Conclusion : *There was no difference in maternal satisfaction regarding to the techniques and the outcomes between EA and SA .*

Keywords : *Satisfaction, Epidural, Spinal, Anesthesia, Cesarean section*

J Med Assoc Thai 2004; 87(6): 628-35

Epidural and spinal techniques for cesarean section have been proved for their safety to both mothers and fetuses[1,2]. Either epidural or spinal techniques can be applied for uncomplicated mothers; however, the chosen technique usually depends on preferences of anesthesiologists and obstetricians. Advantages of epidural anesthesia (EA) are cardiovascular stability, usefulness of indwelling catheter for adding the incremental local anesthetics and opioids, no loss of proprioception and no intentional dural puncture. For spinal anesthesia (SA), there are rapid and reliable quality of anesthesia, short and less painful procedure and complete inhibitions of all spinal cord sensation. Dominantly, postoperative distressing events to mothers such as headache, backache, pain at the operation site and side effects of pain treatment have been more recognized than those of intraoperative events due to sedation and excitements of the first sight of their babies. Thus, post dural puncture headache (PDPH) after SA has been concerned mostly with a high incidence and severity, which resulted from larger diameter spinal needles. Recently, the advent of atraumatic and traumatic 27-G needles has reduced the incidence of PDPH to 0.53-1.7 % and 1.85-2.9% respectively[3,4].

Correspondence to : Sindhvananda W, Department of Anesthesiology, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, Thailand.

Presently, SA seems to be more appreciable among patients, obstetricians and anesthesiologists. In addition to PDPH, intrathecal morphine was reported to cause more severity of pruritus and nausea or vomiting than epidural morphine at the same effectiveness of pain control[5]. However, pain during the procedure, feeling of pulling or tugging during operation and back pain at the injection site are often recognized and complained of by mothers who received EA[6,7]. As a result, these might cause the difference of maternal satisfaction between EA and SA. Thus, disclosure of maternal satisfaction to these two techniques will be a database of patient' preference and then lead to a better anesthesia service. Despite a study of Morgan et al and co-workers of comparison of maternal satisfaction, they included the satisfactory dimension of interaction with family/ staff in addition to the technical effects, intra and postoperative events and side effects[8]. The main objective of the present was to compare maternal satisfaction regarding the techniques and their outcomes between EA with SA by a qualified questionnaire.

Material and Method

Following Institutional Ethics Committee approval and written informed patient consent, mothers who were scheduled for elective cesarean section were included in the study. The exclusion criteria were patients with previously exposed to anesthesia, severe preeclampsia, or those with contraindications to regional anesthesia. One hundred and twenty patients were randomised to receive EA (Group E) and SA (Group S). Patients were non-premedicated and had preloading 15 mL kg -1 of balanced salt. After monitoring, either EA or SA was performed by one of four anesthesiologists, who had more than 5 years experience. Epidural or spinal space was approached at L 2/3 or L3/4 interspaces in the left lateral position. EA was administered using a 18-G Tuohy needle with an epidural catheter threaded 3 cm into the epidural space. Bupivacaine 20 mL, 0.5% with 1: 200,000 epinephrine was given through the catheter (after a 3 mL, 1% lidocaine test dose) and a 5 mL increment every 15 minutes until a bilateral T6 level of anesthesia was assessed by loss of sensation to pinprick. Five milligrams of epidural morphine was given after delivery of the baby and 12 hours after the first administration. The epidural catheter with the distal end enclosed in a sealed plastic bag was taped to the patient's back in order to blind data from the collectors. SA was achieved using a 27-G Quincke needle. After establishing free flow of cerebrospinal fluid, hyperbaric bupivacaine 2.2-2.4 mL, 0.5% with 0.2 mg preservative-free morphine was injected. Anesthetic level was tested by pinprick method and was adjusted to at least T6 prior to skin incision. If the anesthetic level extended less than T6 and evidence of intraoperative sedation with barbiturates, benzodiazepines and ketamine, of these patients were excluded. The set up standard protocol was designed for anesthetic level extension and treatments of hypotension, bradycardia, shivering, nausea or vomiting, pruritus and existing postoperative pain.

The 11-item, self-administered questionnaire was constructed under the standard steps of satisfaction measurement. It had qualified content and construct validity that comprised of 4 common factors related to maternal satisfaction. These were hypotension, quality of anesthesia, postoperative events and procedure (Appendix 1). Reliability was also proved with the Cronbach' s alpha coefficient, which was 0.77[9]. In each item, patients were subjected to make a point on a ten - centimetre-long straight line (visual analogue scale-VAS). The score of 0 represented strong disagreement or being satisfied whereas the score of 10 represented strong agreement or being dissatisfied. Trained collectors, who did not know the anesthetic techniques of their respondents, collected data at the post-anesthesia care unit (PACU) for items 1-7 and postoperative 24-48 hours in the wards for items 8-11.

Data analysis

The factor scores were calculated from the summation of the factor-associated item scores. The meanings of items were negative direction, so the item score was initially converted (10-the item score) before taking the summation. For example the score of factor 1 was derived from the summation of the converted-item score 6 and 7. The total satisfaction score was the summation of 11 converted-item scores. Mann Whitney U test was used to compare the factor scores and the total satisfaction score. Age, body weight, duration of operation, and the amount of medications between Group E and Group S were tested by Student-t test. Indications for cesarean section, performing anesthesiologist, difficulty of blocks, performing obstetrician and type of incision were tested by chi-square. A $p < 0.05$ was considered significant. Headache, peripheral neurological deficit and accidental dural puncture were observed

Appendix 1 The questionnaire

Satisfaction dimension	Item	Factor*
Satisfaction with procedure	1. I felt pain during injection.	Factor 4
	2. The time of injection was long.	Factor 4
Satisfaction with quality of anesthesia	3. I felt pain during the operation.	Factor 2
	4. I felt tugging or pulling during the operation.	Factor 2
	5. I felt tightness in my chest.	Factor 2
	6. I felt nausea or vomiting during the operation.	Factor 1
	7. I felt faint during the operation.	Factor 1
Satisfaction in the postoperative period	8. I felt pain at the operation site.	Factor 3
	9. I felt itching.	Factor 3
	10. I felt nausea or vomiting in the ward.	Factor 3
	11. I felt backache.	Factor 3

* Derived from factor analysis; factor extraction by principal method and factor rotation by Varimax. Four common factors: named and the rotation sum squared loading were as follows-Factor 1 (hypotension) with 1.760, Factor 2 (quality of anesthesia) with 1.699, Factor 3 (postoperative events) with 1.556 and Factor 4 (procedure) with 1.384. The cumulative variance of the questionnaire was 70.09%

regarding the number of events. Severity of headache was determined by VAS score of 0-10.

Results

Six patients (4 in Group E and 2 in Group S) were excluded due to failure of blockade or intraoperative sedation with the disallowed drugs. Demographic data: age, body weight, and in dications for cesarean section, revealed no statistical difference between the two groups (Table 1). The total satisfaction scores of Group E and S were 89.48 $\pm$ 9.31 and 90.03 $\pm$ 11.26 respectively with no significant difference ($p = 0.442$). All the factor scores showed no statistical difference (Table 2).

Performing anesthesiologists, represented by the number of patients who were anesthetised by the four anesthetists, showed no statistical difference in number of patients. Difficulty of blocks, graded by single or multiple attempts of blocks, performing obstetricians whose levels were consultants or residents and types of incision showed no significance between the two groups (Table 3). Intraoperative and postoperative medications regarding the amount of drugs showed no significant differences (Table 4). The durations of operation were 41.04 $\pm$ 14.20 and 40.47 $\pm$ 11.64 minutes respectively with no statistical significance. No accidental dural puncture and peripheral neurological deficit were observed. The mean headache scores were 0.45 $\pm$ 1.74 and 0.78 $\pm$ 1.23 in Group E and S respectively. None of the patients was diagnosed with PDPH until discharge.

Table 1. Demographic data

Variables	Group E	Group S	P-value
Number	56	58	
Age (year)	31.07$\pm$5.31	31.60$\pm$5.31	NS
Body weight (kg)	68.83$\pm$9.45	67.97$\pm$9.56	NS
Indication (number)			NS
Cephalo-pelvic disproportion	33	32	
Breech	9	8	
Mild preeclampsia	7	9	
Premature rupture of membrane	7	9	

Age and body weight are shown in mean $\pm$ standard deviation
Group E = Epidural anesthesia, Group S= Spinal anesthesia

Table 2. The factor scores and the total satisfaction score

Common factor (Name)	The Scores*		P-value
	Group E	Group S	
Factor 1 (Hypotension)	17.95$\pm$3.45 (4-20)	17.45$\pm$3.99 (4-20)	NS
Factor 2 (Quality of anesthesia)	26.52$\pm$4.49 (10-30)	26.84$\pm$3.65 (16-30)	NS
Factor 3 (Postoperative events)	29.89$\pm$5.94 (11-38)	30.21$\pm$5.91 (17-39)	NS
Factor 4 (Procedure)	15.13$\pm$2.57 (8-19)	15.53$\pm$2.45 (7-20)	NS
Total satisfaction score	89.48$\pm$9.31 (62-105)	90.03$\pm$11.26 (57-106)	NS

Values are expressed as mean $\pm$ standard deviation and range (min-max)
*All the scores are presented in the converted score (satisfaction scores)

Table 3. The possible confounding factors

Variable	Group E (n = 56)		Group S (n = 58)		P value
	Number	%	Number	%	
Exclusion from incomplete blockade and disallowed sedation	4	7.14	2	3.45	
Anesthesiologists					NS
1st	6	10.71	6	10.34	
2nd	5	8.93	6	10.34	
3rd	26	46.29	26	44.83	
4th	19	33.93	20	14.48	
Difficulty of blocks					NS
Success on 1st attempt	45	80.36	39	32.76	
More than one attempt	11	19.64	19	67.24	
Obstetricians					NS
Consultants	13	23.21	14	24.14	
Residents	43	76.79	44	75.86	
Type of incision					NS
Midline	41	73.21	40	68.97	
Pfanensteil	15	26.79	18	31.03	

*The values present in mean ± S.D and are tested by student t test
Others are tested with Mann Whitney U test. NS= not significant

Table 4. The medications

Variable	Group E (n=56)			Group S (n=58)		
	Number	%	Amount (mg)	Number	%	Amount (mg)
Intraoperative drugs						
Ephedrine	24	42.86	5.46±8.70	32	55.17	8.05±8.61
Atropine	2	3.45	0.22±1.60	0	0	0.00±0.00
Metoclopramide	8	14.29	1.43±3.53	11	18.97	2.16±5.22
Pethidine	15	26.79	10.71±19.62	11	18.97	5.26±11.97
Postoperative drugs						
Nalbuphine	10	17.86	0.88±2.05	8	13.79	0.84±2.44
Metoclopramide	14	25.00	2.86±5.30	9	15.52	1.55±3.65
Ondansetron	0	0	0.00±0.00	1	1.72	0.01±0.52
Chlorpheniramine	6	10.71	0.96±2.90	2	3.57	0.34±1.84

Values are expressed as mean ± standard deviation unless otherwise stated
All the drugs were tested and showned no significance

Discussion

Maternal satisfaction for cesarean section regarding the techniques and outcomes of regional anesthesia and analgesia has been doubtful for years. Development of a qualified questionnaire could reveal these satisfactions. Construction of the questionnaire was based on the standard step recommended by Fung D et al[10]. The meanings of all items were in negative direction and associated with possible bad experiences during anesthesia, which can avoid social desirability bias. For example, if the item was 'I was satisfied with anesthesia', there has been a tendency to reply 'satisfied' in order to serve social expectation[11]. Validity as well as reliability of the questionnaire were verified and showed good results. Also Factor analysis was used to test for construct validity, which showed the good result of cumulative variance of the questionnaire. That meant the questionnaire covered a high percentage of aspects of maternal satisfaction regarding regional techniques and their outcomes. Moreover, it demonstrated the factors that most influenced satisfaction, which were hypotension and quality of anesthesia[9]. Unlike the study of Morgan[8],

'Interaction with staff/family' was not included in this study. Since this dimension, including such the baby bonding, seeing and holding the baby and interacting with their partner, was supposed to show no difference in non- sedated mothers undergoing both techniques. Also, it could not reveal this dimension concerning the interviewed mothers since the questionnaire construction[9].

This study was designed to avoid selection bias, confounding bias, and measurement bias. Selection bias was eliminated by randomization. Regarding confounding bias, the patients who had previously received anesthesia were excluded because previous anesthesia may affect the preference of anesthesia, and then the assessment of satisfaction. Variations on performance among the anesthesiologists might affect patients' satisfaction. Thus, only 4 anesthesiologists were permitted to perform the anesthesia. Moreover, the control of anesthesia level to at least the 6^{th} thoracic dermatome and the protocols for treatments of hypotension, shivering, pruritus, nausea or vomiting, and postoperative existing pain were set up in order to control the possible variations, which can certainly affect satisfaction. Finally, patients who required supplementary with barbiturate, benzodiazepine or ketamine were excluded, since these medications can cause drowsiness, confusion and amnesia, which can effect the assessment of satisfaction at PACU. Regarding the measurement bias, the tool for measurement of satisfaction was verified and showed good validity and reliability[9]. Data was collected at the postoperative period (1-2 hours) in PACU when the patient can recall exactly the events in the operative period. The next data collection was at the postoperative period (24-48 hours) for those postoperative uncomfortable conditions from EA or SA. The questionnaire in this study was self-administered, which enabled the patients to judge freely.

For psychological measurement, the VAS score was appropriate for assessment of continuous variable data[12]. The total satisfaction scores were high in both groups with no significant difference. Similarly, comparisons of the factor scores showed no statistical difference. These indicate despite differences in severity of hypotension, quality of anesthesia, postoperative events and procedures, whether EA or SA causes the same degree of maternal satisfaction. As a result, the protocols such as the treatment of hypotension and the desirable adequacy of anesthesia caused fewer undesirable intraoperative events of discomfort. This revealed stated that provision of high quality of anesthesia by whichever technique can make patients equally happy. Postoperative events assumed to affect satisfaction were PDPH, pruritus and nausea or vomiting (PONV). Unfortunately, an item associated PDPH had to be excluded from the questionnaire due to its low incidence causing unreliability of the questionnaire[9]. The headache score at postoperative 24 hours was recorded separately to detect PDPH and showed very low scores with no significant difference between the two groups. This indicated there was no PDPH despite a short period of headache score monitoring. A recent meta-analysis of Choi demonstrated risks for PDPH, which had to be followed up for 7 days, in EA and SA with atraumatic 27-G needles were 1/67 and 1/59 respectively[3]. The traumatic 27-G needle was used in the present study as normally practiced by the authors. If based on the study of Choi, there was probably at least one patient with PDPH in 58 samples. For the accidental PDPH, 56 samples seemed to be too small to detect it. However, if the accidental PDPH had occurred, SA would have been replaced instead of EA. Evaluation of satisfaction with this questionnaire in those unfortunate mothers would be unreliable. Since the score of factor 1 would represent satisfaction to EA, but others would represent those to SA. Thus, the comparison using this questionnaire is limited by the event of accidental PDPH. Consequently, it was unnecessary to increase the sample size to detect the accidental PDPH in case of using this questionnaire. Imaginary, PDPH after EA could cause more severity and less maternal satisfaction than PDPH after SA. How can we know the unsatisfactory feeling due to these unfavorable events? Fortunately, a study of Seeberger et al demonstrated no significant difference in percentages of patient satisfaction, which were 93% and 97% in those who received EA (101 samples) and SA (101 samples) despite the incidences of PDPH in EA and SA were 4% and 7% respectively. Also the authors suggested the PDPH from SA should not be concerned considered to be a disadvantage[6]. Thus, PDPH should be less important as a satisfactory issue.

Pruritus is claimed to affect maternal satisfaction. Intrethecal morphine causes dose-related pruritus[13]. In contrast, Parmer recently reported that pruritus did not differ among patients receiving 1.25, 2.5, 3.75 or 5 mg of epidural morphine after

cesarean section because the threshold of appeared pruritus is 1.25 mg of morphine[14]. Reasons for doses of epidural and intrathecal morphine in the present study were the normal practice of the authors and in respect of safety[14-17]. There was no significant difference in the scores of factor 3 and also the pruritus-related score (item 9). That meant in the setting of epidural morphine of 5 mg twice a day and intrathecal morphine of 0.2 mg for 24-hours post cesarean section could not detect any difference in pruritus. Correspondence with the study of Kjellberg F et al, the systematic review demonstrated the incidences of pruritus were on average 60% with epidural morphine and 58% with intrathecal morphine. There was no evidence of a relationship between the dose of epidural morphine and the incidence of pruritus with both intrathecal and epidural routes[19]. Unlike the study of Morgan, pruritus after 0.2 mg of intrathecal morphine was claimed to cause less maternal satisfaction than 4 mg of epidural morphine[12]. If it is based on the study of Parmer, epidural morphine 4 mg and 5 mg should not produce any difference in pruritus. Once pruritus occurs, the patient needs an effective and satisfactory treatment. All patients know pruritus might occur as a side effect. Thus, the effective treatment is more important than the incidence and severity of pruritus. Morgan et al did not mention the treatment for pruritus. Possibly, the patients receiving epidural and spinal morphine in the study of Morgan et al derived differences in pruritus treatments. As a sequence, it leads to the result of more maternal satisfaction to epidural than spinal anesthesia[8]. In the present study, the protocol was set to control postoperative pruritus with chlorpheniramine for the first requirement and nalbuphine for the next requirements. Doses of chlorpheniramine were recorded and showed no significant difference. None of the patients who were previously treated with chlorpheniramine requested the second treatment. This confirmed the same severity and the adequate treatment of pruritus in both groups that lead to equal satisfaction. Though a systematic review of pruritus treatment shows the least effectiveness of chlorpheniramine[18], it was still used it as the first line drug in the present study. Because the authors considered the antagonist effect of nalbuphine on the mu receptor, which might emerge some pain. Moreover, nalbuphine was set up as a rescue analgesic drug, so comparison of the amount of nalbuphine could not represent the same severity of pruritus.

Nausea or vomiting can cause unpleasant conditions. Central opioids are highly related to PONV. However, PONV is a multifactorial entity, comprising patient, surgical, and anesthetic factors[19]. There was no difference in the score of factor 3, which contained the PONV-related item. Also there was no difference in amount of antiemetics between the two groups. This demonstrated PONV after EA and SA caused the same degree of dissatisfaction.

In spite of the negative result of the present study, the myth of whether EA or SA causes much more satisfaction has been disclosed. There was no difference in maternal satisfaction regarding EA and SA at postoperative 24 hours in case of good conduction of anesthesia and prompt treatments for adverse effects. Thus, the rationale to choose the technique should follow maternal status and preference of the anesthesiologist. Since the technique according to the anesthesiologist's ability usually leads to good anesthetic results and high patient satisfaction. However, the present study did not include experienced mothers as they might prefer a previous, well conducted anesthetic technique to the unknown one. A patient has a right to choose the anesthetic technique if not against her safety.

Conclusion

There was no difference in maternal satisfaction regarding epidural anesthesia with 5 mg morphine twice a day and spinal anesthesia with 0.2 mg once a day.

References

1. Nauty JS, Becker RA. Epidural and spinal analgesia and anesthesia: contemporary issues. Anesth Clin North Am 1992; 10: 103-27.
2. Robson SC, Boys RJ, Rodeck C, et al. Maternal and fetal haemodynamic effects of spinal and extradural anaesthesia for elective caesarean section. Br J Anaesth 1992; 68: 54-9.
3. Choi PT, Galinski SE, Takeuchi L, el al. PDPH is a common complication of neuraxial blockade in parturients: a meta-analysis of obstetrical studies. Can J Anaesth 2003; 50: 460-9.
4. de Diego R, Tisner ML, Cabrevizo P, Sanjoaquin T. Comparison of two 27-G-caliber needles for spinal anesthesia, study of 1,555 patients. Rev Esp Anestesiol Reanim 2003; 50: 182-7. (abstract)
5. Sinatra RS. Postoperative analgesia: epidural and spinal technics. In: Chestnut DH (ed). Obstetric anesthesia: principles and practice. St. Louis: Mosby-Year Book, 1994: 513-47.

6. Seeberger MD, Lang ML, Drewe J, et al. Comparison of spinal and epidural anesthesia for patients younger than 50 years of age. Anesth Analg 1994; 78: 667-73.
7. Narang VP, Linter SP. Failure of extradural blockade in obstetrics. A new hypothesis. Br J Anaesth 1988; 60: 402-4.
8. Morgan PJ, Halpern S, Lam-McCulloch J. Comparison of maternal satisfaction between epidural and spinal anaesthesia for elective caesarean section. Can J Anaesth 2000; 47: 956-61.
9. Sindhvananda W, Leelanukrom R, Tingthanathikul W, et al. A questionnaire for measurement of maternal satisfaction to regional anaesthesia for caesarean section. Asean J Anaesthesiol 2002; 3: 65-72.
10. Fung D, Cohen MM. Measuring patient satisfaction with anesthesia care: a review of current methodology. Anesth Analg 1998; 87: 1089-98.
11. Le May S, Hardy JF, Taillefer MC, et al. Patient satisfaction with anaesthesia services. Can J Anaesth 2001; 48: 153-61.
12. Melzack R, Katz J. The Mcgill Pain Questionnaire: appraisal and current status. In: Melzack R. Pain measurement and assessment. New York: Raven press, 1983: 152-68.
13. Palmer CM, Emerson S, Volgoropolous D, et al. Does response relationship of intrathecal morphine for postcesarean analgesia. Anesthesiology 1999; 90: 437-44.
14. Palmer CM, Nogami WM, Van Maren G, et al. Postcesarean epidural morphine: a dose-response study. Anesth Analg 2000; 90: 887-91.
15. Terajima K, Onodera H, Kobayashi M, et al. Efficacy of intrathecal morphine for analgesia following elective cesarean section: comparison with previous delivery. J Nippon Med Sch 2003; 70: 327-33.
16. Charuluxananan S, Kyokong O, Somboonviboon W, et al. Nalbuphine versus propofol for treatment of intrathecal morphine-induced pruritus after cesarean livery. Anesth Analg 2001; 93: 162-5.
17. Rosen MA, Hughes SC, Shnider SM, et al. Epidural morphine for the relief of postoperative pain after cesarean delivery. Anesth Analg 1983; 62: 666-72.
18. Kjellberg F, Tramer MR. Pharmacological control of opioid-induced pruritus: a quantitative systematic review of randomized trials. Eur J Anaesthesiol 2001; 18: 346-57.
19. Gan TJ. Postoperative nausea and vomiting- can it be eliminated? JAMA 2002; 287: 1233-6.

ความพึงพอใจของมารดาที่เข้ารับการผ่าคลอด ต่อวิธีการฉีดยาชา และการระงับปวดผ่านทางช่องเหนือไขสันหลังและช่องไขสันหลัง

วัชริน สินธวานนท์, รื่นเริง ลีลานุกรม, อรลักษณ์ รอดอนันต์, ปิ่น ศรีประจิตติชัย

บทนำ *: วิธีการฉีดยาชาและการระงับปวดผ่านทางช่องเหนือไขสันหลังและช่องไขสันหลัง มีความแตกต่างกันในขบวนการทำคุณภาพของการระงับความรู้สึก และสภาพภายหลังผ่าตัด อาการปวดศีรษะหลังจากฉีดยาชา อาการคันและคลื่นไส้อาเจียนภายหลังจากการฉีดยาชาผ่านทางไขสันหลัง แพทย์เชื่อว่าเป็นข้อด้อยเมื่อเปรียบเทียบกับการฉีดยาชาทางช่องเหนือไขสันหลัง*

วัตถุประสงค์ *: การศึกษานี้มีจุดมุ่งหมายเพื่อเปรียบเทียบความพึงพอใจของมารดาที่เข้ารับการผ่าคลอดต่อวิธีการฉีดยาชาทางช่องเหนือไขสันหลังและทางช่องไขสันหลัง เน้นในด้านผลที่ได้จากวิธีการ*

วิธีการศึกษา *: มารดาที่เข้ารับการผ่าคลอดแบบปกติ ที่ไม่เคยได้รับการระงับความรู้สึกด้วยวิธีใด ๆ มาก่อน ไม่ได้รับการวินิจฉัยเป็นครรภ์เป็นพิษชนิดรุนแรง และไม่มีข้อห้ามต่อการระงับความรู้สึกเฉพาะส่วน ทำการสุ่มตัวอย่างได้มารดาสองกลุ่ม กลุ่มที่หนึ่ง (เอพิดูรัล) ได้รับการฉีดยาชาและการระงับปวดผ่านทางช่องเหนือไขสันหลัง โดยใช้ยาชาบูพิวาเคน ขนาด 20-25 มล. ผสมกับอดรีนาลิน สัดส่วน 1:200000 ผ่านทางสายเอพิดูรัล และมอร์ฟีน ขนาด 5 มก. ทันทีหลังเด็กคลอดและภายหลังเติมยาครั้งแรก 12 ชั่วโมง กลุ่มที่สอง (สไปนัล) ได้รับการฉีดยาชาและการระงับปวดผ่านทางช่องเหนือไขสันหลัง โดยใช้ยาชาบูพิวาเคน เฉพาะสำหรับทางไขสันหลัง ขนาด 2.2-2.4 มล. และมอร์ฟีน ขนาด 0.2 มก. ทำการควบคุมปัจจัยที่อาจเป็นตัวแปรกวน ได้แก่ การได้รับการรักษาอาการข้างเคียงที่ต่างกัน โดยจัดทำแนวทางรักษาอาการข้างเคียง เป็นต้น วัดความพึงพอใจของมารดาด้วยแบบสอบถามที่ประกอบด้วย 11 คำถาม ที่ผ่านการตรวจสอบคุณภาพของแบบสอบถามแล้ว และประกอบด้วยมิติหรือปัจจัยร่วมของความพึงพอใจ 4 ปัจจัยร่วม แบบสอบถามเป็นแบบให้ผู้ป่วยกรอกข้อมูลด้วยตนเอง โดยให้จุดบนเส้นตรงขนาดยาว 10 ซม. ทำการเก็บข้อมูลโดยผู้เก็บข้อมูลสองครั้ง ที่ห้องพักฟื้นและที่หอผู้ป่วย เปรียบเทียบคะแนนปัจจัยร่วมทั้งสี่ปัจจัย และคะแนนรวมความพึงพอใจด้วยการทดสอบแมนวิทนีย์ยู กำหนดมีนัยสำคัญที่ระดับน้อยกว่า 0.05*

ผลการศึกษา *: คะแนนปัจจัยร่วมทั้งสี่ปัจจัย ไม่มีความแตกต่างอย่างมีนัยสำคัญระหว่างสองกลุ่มคะแนนความพึงพอใจของกลุ่มเอพิดูรัล เท่ากับ 89.48 $\pm$ 9.31 และของกลุ่มสไปนัล เท่ากับ 90.03 $\pm$ 11.26 ซึ่งไม่ต่างกันอย่างมีนัยสำคัญทางสถิติ*

สรุป *: การศึกษานี้แสดงให้เห็นว่า วิธีการฉีดยาชาและการระงับปวดทั้งสองแบบก่อให้เกิดความพึงพอใจของมารดาไม่ต่างกัน*