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Abstract

Background: This study was undertaken to evaluate patient satisfaction after spinal anaesthesia, which is the most frequently administered anaesthesia in obstetric patients.

Method: A cross-sectional study of patients who underwent caesarean section under spinal anaesthesia in the operating rooms of Hospital Teluk Intan was conducted. Post-operative survey of patients on the day after surgery was conducted by collecting pre-operative and intra-operative data on a constructed questionnaire. Post-operative data, including satisfaction and understanding the anaesthetist's explanation regarding anaesthesia, satisfaction in receiving spinal anaesthesia and adverse effects, and willingness to accept or refuse spinal anaesthesia for a similar surgery again, were inquired by trained anaesthesia personnel.

Results: A total of 200 pregnant patients, with age ranging from 17 to 45 years, were surveyed: 64.5% Malay, 17% Indian, 14% Chinese and 4.5% others. All (100%) the patients were satisfied with the explanation provided regarding the choices of anaesthesia, but 2% could not concentrate on the explanation because of labour pain. Overall, the average satisfaction with spinal anaesthesia administration was divided into 194 (97%) satisfied patients and 6 (3%) dissatisfied patients. Factors associated with dissatisfaction were inadequate analgesia during surgery and failed spinal anaesthesia. Post-operative complications included spinal headache 5 (2.5%), post-operative nausea and vomiting (PONV) 1 (0.5%), pain at the surgical site 2 (1%) and backache 2 (1%). Furthermore, 177 (88.5%) patients would opt for spinal anaesthesia in future for similar surgery, if required; 16 (8%) would not; and 7 (3.5%) were not sure. The reasons for refusal to receive spinal anaesthesia were as follows: awareness and failed regional anaesthesia.

Conclusion: The patients receiving spinal anaesthesia demonstrated a high rate of patient satisfaction. Ensuring the quality of spinal anaesthesia, improving clinical skill of the anaesthesiologists, and prevention of side effects might improve patient satisfaction.

Keywords: spinal, anaesthesia, patient satisfaction, caesarean section

Introduction

The choice of anaesthesia for any caesarean section depends on multiple factors such as the indication of surgery, urgency of surgery, and patient's as well as surgeon's desire. Anaesthesiologists always prefer the method which is safe and most comfortable for the mother, least depressant to the newborn and provides the optimal working conditions for the obstetrician, regional anaesthesia fulfils all these criteria. The advantages of regional anaesthesia include an awake mother at delivery, minimal depression of the newborn, and avoidance of the risks of general anaesthesia (1). Recently, regional anaesthesia has gained worldwide acceptance, and its physiological effects provide a better outcome for caesarean section, moreover, general anaesthesia is associated with significantly high maternal morbidity and mortality (2).

However, complications occurring during or after anaesthesia as well as discomfort from the procedure, position, and neuraxial block might compel patients to prefer general anaesthesia.

To improve the quality of spinal anaesthesia and to enhance relationship with patients, this study was undertaken to determine patients satisfaction, the factors causing dissatisfaction as well as the reasons leading to future refusal for spinal anaesthesia.

Methods

Cross-sectional study of all patients who underwent caesarean section under spinal anaesthesia in the operating rooms of Hospital Teluk Intan from April to June 2011 was conducted and evaluated. Patients with

psychological disorders and language barriers were excluded from the study. A total of 200 patients were surveyed. The risk and complications of both regional and general anaesthesia were explained to patients before surgery and an option was provided to decide the mode of anaesthesia. Before attempting the procedure, patient characteristics and previous history of anaesthesia were recorded. Intra-operative complications, including nausea/vomiting, hypotension, bradycardia, and inadequate anaesthesia/analgesia were recorded. Post-operative survey of patients on the day after surgery was conducted by collecting data on a constructed questionnaire. Post-operative data regarding the following were asked by trained anaesthesia personnel; satisfaction and understanding about anaesthetist's explanation regarding mode of anaesthesia, satisfaction in receiving spinal anaesthesia, adverse effects and willingness to accept or refuse spinal anaesthesia for a similar surgery again. The questionnaire used was completed after an interview by a trained personal who was not directly involved in that patient's care. Statistical analyses were performed using Statistical product and service solutions (SPSS) Software (Version 17.0, SPSS Inc., IL, USA).

Results

A total of 200 pregnant patients were surveyed: 64.5% Malay, 17% Indian, 14% Chinese and 4.5% others. A majority of the surgeries were performed as emergency 77.5%, whereas 22.5% were conducted as elective which comprised patients who were seen earlier in anaesthetic clinic. When studying the distribution of cases on the basis of age groups it was found that majority of the patients 62.5% were aged between 20 and 30 years, 33% were aged between 31 and 40 years, 3.5% were aged above 40 years and only 1% were aged below 20 years, mean (standard deviation) age was determined as 28.88 years. (SD 5.44) Furthermore, parity distribution revealed that 55.5% patients were multigravida, whereas 44.5% were primigravida.

All the patients were satisfied with the complete explanations provided by the trained personal regarding applicable anaesthesia methods. However, evaluation of the understanding of these explanations among the patients revealed that 2% failed to completely understand because they were unable to concentrate on the explanations because of labour pain. This was observed in emergency cases where

patients were in active phase of labour.

The average satisfaction of spinal anaesthesia administration was divided into 194 (97%) satisfied patients and 6 (3%) dissatisfied patients. The reported reasons for dissatisfaction were inadequate analgesia and failed regional anaesthesia. These patients either required analgesics (2%), or needed subsequent general anaesthesia administration (1%) during surgery.

Post-operative complications included post-dural puncture headache (PDPH) in 5 (2.5%) patients, post-operative nausea and vomiting (PONV) in 1 (0.5%), pain at the surgical site in 2 (1%) and backache in 2 (1%). Further, PDPH was effectively managed with analgesics, complete bed rest and ensuring good hydration. However, none of these patients required an epidural blood patch.

In addition, 177 (88.5%) patients would opt for spinal anaesthesia in future for similar surgical procedures, if required, 16 (8%) would not and 7 (3.5%) were not sure. The reasons for refusal to receive spinal anaesthesia in the future were as follows: fear of awareness during operation [14 (7%)] and failed spinal anaesthesia [2 (1%)].

Discussion

Spinal anaesthesia is performed by injecting small amounts of local anaesthetic agent into the cerebro-spinal fluid (CSF). Spinal anaesthesia is easy to perform and provides excellent operating conditions for caesarean section. Compared with general anaesthesia, spinal anaesthesia has lower rates of venous thromboembolism, cardiac events, the need for post-operative analgesia, sympathetic responses to surgical stimulation along with few other life-threatening complications. A recent randomised control trial describes benefits of earlier intravenous cannula removal, ambulation, breast-feeding initiation and potential for shorter hospitalisation period after caesarean delivery under spinal anaesthesia (3).

Researching patient satisfaction is important in understanding the problems which patients experience from spinal anaesthesia, and this helps us in improving the quality of anaesthesia and healthcare.

Although most studies report high satisfaction levels for spinal anaesthesia, the satisfaction rate can be overestimated because patients like to please service providers by replying 'satisfied' (4). To overcome this limitation, trained personal, who were not directly involved in that patient's care, were assigned to perform the survey. The trained personnel, who visited patients on the day

after surgery, even though changed frequently, their assessment of patient response were standardised.

A study was conducted to determine the patients' dissatisfaction after spinal anaesthesia, and it showed the following factors resulting in patient dissatisfaction; increasing number of attempts of spinal block, pain during spinal block, inadequate analgesia and post-operative urinary retention (5).

In a study by Bhattarai et al. (6), the main cause of discomfort from regional anaesthesia was reported to be the immobility of lower limbs. In our study, before spinal anaesthesia was administered, symptoms such as numbness, transient paralysis, and transient sensory loss in the lower extremities because of the spinal block were explained to patients. Therefore, patients might not have considered immobility of lower limbs and post-operative urinary retention as dissatisfaction. A study conducted by Sindhvananda et al. (7), revealed that post-dural puncture headache, pruritus, and PONV were predictors of dissatisfaction; in this study, pruritus resulted due to intrathecal morphine. However, we did not use morphine or observe pruritis.

In addition, post-operative backache was associated with dissatisfaction and refusal of spinal blocks in some studies (8). Although the backache might not directly be attributed to the spinal block, it was difficult to distinguish the actual cause of backache. Other variables such as positioning during surgery, a tightly applied surgical dressing, surgical trauma, operation time, age, pregnancy, needle type, and the number of punctures can also contribute to post-operative backache.

In our study, the dissatisfaction rate of spinal anaesthesia was 3%, and the refusal rate for spinal anaesthesia in the future was 8%. Ensuring good quality of spinal anaesthesia and improving clinical skill of anaesthesiologists might improve patient satisfaction rate. Awareness during surgery was the main reason for refusal. This refusal can be managed by explaining advantages of regional anaesthesia which can avoid the incidence of general anaesthetic complications (failed intubation and aspiration pneumonia) as well as early bonding between the mother and the newborn because the mother is awake during the procedure. Roy et al. (9), hypothesised that this dissatisfaction might also be because the mothers' unmet expectations regarding levels or states of consciousness as observed with general anaesthesia.

Conclusion

Side effects, inadvertent mistakes and unskilful techniques, can negatively affect patient perspectives about spinal anaesthesia. Some factors which can increase the satisfaction rate of patients who are undergoing a surgery with spinal anaesthesia are as follows; First, a patient's opinion is very important when deciding the anaesthetic method. Second, the anaesthetists must provide complete explanations regarding spinal anaesthesia before surgery. Third, the anaesthetists should have good rapport with their patients. Finally, the anaesthetist should manipulate the patient skilfully and sedate the patients if they wish.

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Conflict of Interest

None.

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Authors' Contribution

Conception, design, and final approval of the article: NAAZ

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