Original Article

Knowledge and attitudes of Pakistani women towards anaesthesia techniques for Caesarea Section

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Abstract

Objective: To assess knowledge and attitudes of Pakistani women towards different options of anaesthesia techniques for caesarean section and also to identify their sources of information about them.

Methods: A total of 410 women scheduled for elective caesarean section were enrolled after informed written consent in this hospital based cross sectional survey. The women were interviewed preferably in Urdu (national) language according to structured pre coded questionnaire by one of the investigators and the sequence of questions was strictly followed. This survey included pertinent questions to assess knowledge and attitudes of our women towards choices of anaesthesia techniques. The questionnaire was filled according to their responses and submitted to the research assistant of the Department on the same day.

Results: It was seen that 82.4% of the study population was aware of the existence of anaesthesia techniques however, 48% of women preferred general anaesthesia, 33% regional anaesthesia while 18% were not sure of what to choose. Reasons of preferring general anaesthesia mainly were previous general anaesthesia experience and fear of being awake and hearing noises during surgery. Regional anaesthesia was refused mainly due to their concerns about backache, headache and inadequate anaesthesia.

Conclusion: This survey showed that Pakistani women are well aware about the existence of anaesthesia techniques however they do reveal lack of knowledge about their risks and benefit leading to high refusal rate of regional anaesthesia. Anaesthetists were seen as a major source of information.

Keywords: Caesarian section, General anaesthesia, Regional anaesthesia (JPMA 61:359; 2011).

Introduction

Regional anaesthesia for caesarean section is considered a safe technique and has gained worldwide popularity. The choice of anaesthesia techniques can be expected to differ between countries and culture and probably this could be the reason of low demand of regional anaesthesia in developing countries.[1,2] In our country unfortunately we come across obstetric population who frequently refuse regional anaesthesia or analgesia. Very little data is available for the reasons of refusal or low utility of regional technique in our country; however it seems multi factorial including cultural differences, lack of knowledge and false beliefs.[3]

In our institution, a leading tertiary care center of Pakistan and conducts approximately 5000-6000 deliveries per year inclusive of 1000 caesarean sections. Regional anaesthesia at present is not accepted by the obstetric population. This issue is important in order to help the

anaesthetists and obstetricians of our country to communicate with the patients more effectively about the options of anaesthesia and also to increase public awareness about availability of these anaesthesia techniques. This survey was designed to assess knowledge and attitudes of Pakistani women towards various anaesthesia techniques for caesarean section and also to identify their sources of information about these options.

Methods

After approval from the hospital's ethics committee, this hospital based cross sectional survey was conducted at the obstetric unit of Aga Khan University Hospital, a tertiary care centre, of Pakistan. A total of 410 patients were enrolled in order to achieve an anticipated knowledge of 50% in the population (unknown) with 95% confidence interval and 5% bond on the error.

All patients scheduled for elective caesarean section were included. Exclusion criteria were patients' refusal for participation, contraindication to any particular type of anaesthesia, mentally challenged patients, language barrier and history of psychiatric disease. Upon arrival in the preoperative area of the obstetric operating suite, the informed written consent was taken. The women were interviewed preferably in Urdu (national) language according to structured pre coded questionnaire by one of the investigators and sequence of questions was followed strictly. The questionnaire was filled according to the responses and deposited with the research assistant of the Department on the same day.

This survey included pertinent questions to assess knowledge and attitudes of our women towards choices of anaesthesia techniques e.g. Is she aware about different anaesthesia options available? What is her source of information? Past history of any operation, type of anaesthesia received and experience associated with it? Anaesthesia of choice this time and why? (Reasons for refusal for regional anaesthesia or preference of General anaesthesia).

Data was entered and analyzed on Statistical Package for Social Sciences (SPSS) version 13.0. Descriptive analysis was done in terms of frequencies with percentages. Mean with standard deviation of women's age was also computed. Chi-square test was calculated between knowledge of women about options of anaesthesia technique and age groups, education level, occupation and previous history of anaesthesia. The results of univariate analysis were reported in terms of odds ratio with 95% confidence intervals and for multivariable analysis adjusted odds ratio with 95% confidence interval. A p-value less than 0.05 was taken as significant.

Results

A total of 338 women out of 410 (82.4%) were aware about the existence of different anaesthesia techniques. Majority of them were educated house wives of between 25 to 29 years of age and anaesthetists were found to be a major source of information provided to them. Remaining 72 (17.6%) women in our survey were found totally unaware about various options of anaesthesia technique (Table-1).

Out of all, 198 (48.3%) women chose general anaesthesia, 137 (33.4%) preferred regional anaesthesia while 75(18.3%) were not sure of the selection. The

Table-1: Socio demographic characteristics.

Variables	N= 410 N (%)	Have Knowledge About options of Anaesthesia N (%)
Age years		Mean age 29.35 ± 4.8
<25	66 (16)	47 (71)
25-29	151 (36)	135 (81)
30-34	131 (32)	106 (81)
35 and above	62 (15)	50 (80)
Education Level		
Below Matric (Grade X)	21 (5)	8 (38)
Matric (Grade X)	30 (7.3)	19 (63)
Intermediate (Grade XII)	76 (18.5)	62 (81)
Graduate	283 (69)	228 (88)
Occupation		
House wives	337 (82.2)	271 (80)
Employed*	73 (17.8)	67 (92)

* Doctor/Nurse/Midwife/Teacher/engineer/Social worker.

Table-2: Reasons of preferring and refusal of general and regional anaesthesia.

Variables	N (%)
Reasons of preferring general anaesthesia	N = 198
It has no or less risk	31 (7.6)
Previous experience	100 (24.4)
Fear of seeing things during surgery	89 (21.7)
Fear of hearing noises during surgery	37 (9)
Other choices were not given	3 (0.7)
Reasons for refusal for regional anaesthesia	N = 198
Concerns about needle pain	23 (5.6)
Concerns about back pain	107 (26.1)
Concerns about head ache	29 (7.1)
Concerns about paralysis	10 (2.4)
Concerns about numb legs	12 (2.4)
Inadequate anaesthesia	37 (9)
Met someone with bad experience of anaesthesia	32 (7.8)
Reasons for choosing regional anaesthesia	N = 136
It is safer method for parturients	102 (25)
Wants to see her baby	37 (9)
Wants to be awaked during operation	25 (6)
Advice of relative	8 (2)
Reasons for refusal of general anaesthesia	
Fear of not reawakening	62 (45.6)
Fear of sore throat	59 (43.4)
Side effect to baby	47 (34.6)

Table-3: Univariate analysis for knowledge about anaesthesia options for caesarean section.

Characteristics	Odds Ratio (95% C.I.)	p- value	Adjusted Odds Ratio (95% C.I.)	p- value
Age Group				
<25 years	1		1	
25-29 years	3.41 (1.62, 7.17)		4.36 (1.32, 14.43)	0.066
30-34 years	1.71 (0.86, 3.41)		4.20 (1.26, 14.03)	
35 years & above	1.68 (0.74, 3.84)	0.011	2.38 (0.63, 8.93)	
Occupation				
Housewife	1			
Health Care Professional	8.04 (1.08, 59.83)			
Others	1.66 (0.62, 4.40)	0.012		
Previous operation requiring anaesthesia				
No	1			
Yes	3.9(2.29, 6.57)	<0.001		

indecisive women had left the decision either on their obstetrician (87%), anaesthetists (53.3%) or husband/family (9%). Out of 410, 292(71.4%) women had previous experience of anaesthesia for caesarean section and not all of them chose similar type of anaesthesia this time in both the groups. A total of 233 (79.8%) women received general anaesthesia in the past and 59 (25%) out of them selected regional anaesthesia this time. Similarly 11 (24%) preferred General Anaesthesia presently out of 46 women who had received regional anaesthesia in the past.

The previous experience of general anaesthesia (24.4%), fear of seeing things (21.7%) and hearing noise during surgery were the main reasons for choosing general anaesthesia in our population .While fear of prolonged unconsciousness (45.5%), sore throat (43.4%), and possible side effects of drugs on the baby (34.6%) were the common reasons to refuse general anaesthesia (Table-2).

The women who wanted to see their baby at birth and which amounted to 25%, considered regional anaesthesia as a safer technique. While the main reasons for refusal of regional anaesthesia were fear of back pain (26.1%), head ache (7.1%) and inadequate anaesthesia (9%) (Table-2).

Univariate analysis carried out to see the factors associated with the women's knowledge regards options of anaesthesia technique for caesarean section is shown in Table-3. The women aged between 25-29 years had significantly higher knowledge as compared to age <25 years. We found significant association of knowledge of the women with their occupational status. Health care professionals were found well aware as compared to house wives. Women with previous history of anaesthesia were found more knowledgeable as compared to those without previous anaesthesia experience. Similarly type of anaesthesia for previous surgery also had an impact on women's knowledge. In the multi variable analysis, age of the respondent and choice of anaesthesia were significantly associated with knowledge about anaesthesia.

Discussion

Most of the studies conducted in last few decades for quality improvement in anaesthesia techniques for caesarean section were either focused on drugs to prove their safety or on equipment like spinal and epidural needles to facilitate regional anaesthesia. Regional techniques for pregnant women are now considered the technique of choice due to several advantages including decreased risk of gastric aspiration, avoidance of exposure of anaesthetic depressant effects of drugs on neonates and lesser incidence of blood loss during surgery.[3,4] The obstetric population very often refuses regional anaesthesia or analgesia for caesarean or vaginal delivery. This study has focused towards the common factors responsible for the refusal of regional anaesthesia e.g. lack of awareness and fear and misconceptions associated with these techniques.

This study has shown that 82.4% of women were aware about the existence of various anaesthesia techniques for caesarean section. This is much higher as compared to previous work conducted in developing countries.[1,2] However it may not reflect a true picture as the tertiary care hospital, where the study was conducted, is a private hospital affiliated with an international university and only upper middle and high economical class patients can afford the medical cost. In this survey 69% of women were graduates and ample evidence suggests that education enhances awareness on types of anaesthesia techniques.[3,5]

This study found significant association between knowledge on options of anaesthesia technique and age. The younger age group (25-29years) had good knowledge as compared to 30 years and above and similar findings have been reported in a previous study.[5] The younger age group is computer literate and can acquire information on medical treatment from the internet and other media. This could be the most likely explanation. It had been shown previously that occupation has a strong impact on raising the awareness of the individual.[6] This study also showed that females who

were housewives had less knowledge regarding options of anaesthesia technique as compared to the working women.

This survey showed that women with previous experience of anaesthesia had good knowledge on anaesthesia techniques as compared to those without previous exposure; this is contrary to a study conducted in India in which previous history of anaesthesia had no association with increased awareness.[7,8] Although previous surgery enhanced women's knowledge about anaesthesia options, yet not all of them selected the same type of anaesthesia as they had in the past. This signifies the importance of previous experience of the patient rather than the technique only. Overall experience meant included the technique itself and communication with the anaesthetist.

Regarding sources of knowledge about options of anaesthesia, anaesthetists were the major source as has also been mentioned previously.[9] In this study, 48.3% opted general anaesthesia as compared to 33.4% of regional anaesthesia and this is well matched with trends in Nigeria.[2] However these findings do not correlate with trends in the developed countries where rate of regional anaesthesia is more than 90% for elective caesarean section and general anaesthesia is used in only 9% of cases.[10,11] Presently in most parts of Europe and USA the rate of general anaesthesia is as low as 3% which seems unbelievable in our population.[12]

The major reasons of preferring general anaesthesia identified in this study were previous experience of general anaesthesia, fear of seeing things during surgery and false belief that General anaesthesia has no or lesser risk. This shows poor knowledge and misconcepts of our women about safety of general anaesthesia for caesarean section. These also have been recently highlighted in other parts of the world.[1,8]

The most common reason given for refusal of regional anaesthesia were back ache, head ache, and fear of inadequate anaesthesia. Most of them are based on misconceptions as mentioned in other studies also. This showed poor knowledge about anaesthesia.[9,10] The most common reason for preferring regional anaesthesia was the understanding of women (74.5%) about it as a safer technique for caesarean section. This finding is well matched with the previous work in which most of the women (45.2%), who refused general anaesthesia, had fear of not waking up at the end of surgery.[9] It seems that the majority of responses is based on the misconcepts and false beliefs of women who belong to relatively educated upper and middle class. This would not reflect the response of our whole population which could have been worse considering low literacy rate and poor economical class.

Conclusion

In summary this survey showed that our women are well aware about the existence of anaesthesia techniques however they do reveal lack of knowledge about their risks and benefit. Further work needs to be done in this regard to find out why majority of women refuse regional anaesthesia if anaesthetists were seen as a major source of information.

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