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Research Article

Prevalence of Chronic Low Back Pain Due to Cesarean Section Under Spinal Anesthesia among the Housewives in Faisalabad District

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ABSTRACT

Background/Objectives: Back pain is one of the most frequent diseases complained by female population, a common reason for physician visits and a major psychological, physical and economic burden. Low back pain is a serious public health issue and 80% of adults experience a minimum of one episode of back pain throughout their lives. But it is more common in housewives who undergo through cesarean section under spinal anesthesia. The purpose of the study is to determine the prevalence of chronic low back pain among housewives having cesarean section under spinal anesthesia in Faisalabad district.

Material and methods: Study population was comprised of 100 housewives of ages 20-50 having low back pain in mother care centers of private hospitals of Faisalabad district. Population was chosen through convenient sampling. Data collection tools were a modified questionnaire and VAS scale. Collected data was analyzed through SPSS software version 17.0. Prevalence was measured by descriptive statistics.

Results: 78% housewives had low back pain after cesarean section under spinal anesthesia. 21.8% had mild pain, 44.9% had moderate pain and 33.3% reported severe pain.

Conclusion: Majority of the housewives complained of low back pain after cesarean section under spinal anesthesia.

Keywords: Chronic low back pain; Cesarean delivery; Spinal anesthesia

INTRODUCTION

LBP is outlined as pain limited to the area between the lower margins of the 12th rib and also the gluteal muscles [1]. Low back pain (LBP) associated with physiological condition affects women's lives severely, having an excellent impact on their quality of life [2]. Tendency is increasing for pregnant females who have not any obstetrical indications for cesarean delivery to be advised for this method because they thought it safe and convenient than birth through vagina [3]. This condition has become an important issue resulting in the enhanced rate of delivery through C- section in China [4]. Low back pain is complained by pregnant females during and after delivery. Major studies depict that at least 1/2 of the pregnant females are suffering from low back pain [5]. 5% to 40% pregnant females have reported persistence of low back pain even after 6 months of delivery [6]. According to many parturient and obstetricians, it is caused by spinal anesthesia [3]. With the increasing use of spinal anesthesia throughout labor and delivery, medical specialty anesthesiologists are confronted with the idea that the LBP in their postnatal patients is in a way connected with insertion of the spinal anaesthesia. Recently birth of the child by lower segment cesarean section delivery is increasing and a lots of mothers have a complaint of low back pain after the birth of child by C section [7]. C section is done if natural birth can't take place due to certain medical conditions and abnormal position of the baby. Incidence of caesarean section is increasing alarmingly now a day due to abnormal fetal status and for the avoidance of future medico-legal complications [6]. Although this process keeps the baby safe yet many women experience low back pain after C section which is accompanied by spinal anesthesia. The current study discovered likelihood of LBP in a female after pregnancy who had parturition with epidural anesthesia is 6.3 times more than LBP for a female who had delivery through vagina in the absence of epidural anesthesia. Similarly, the likelihood of LBP for a

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female who had cesarean delivery with epidural anesthesia is 3.6 times more than LBP for a female who had parturition through vagina solely. Stressed positions during normal labor independently are a risk factor for low back pain [8]. The low back pain develops as a result of mothers receiving epidural anesthesia because of less sensitivity to abnormal postures stressing back and therefore allows bad lumber positions to stay for long periods leading to strains in low back after delivery. A second clarification for the pathologic process of LBP is that hematoma formation is present after anaesthesia administration. Therefore, the current study was aimed to assess prevalence and characteristics (intensity, duration, behavior etc) of chronic LBP among the housewives having C section under spinal anesthesia in Faisalabad district.

MATERIALS AND METHODS

Study Settings

This cross sectional prevalence study was carried out in tertiary care hospitals of Faisalabad district, Punjab, Pakistan. Study population was housewives of Faisalabad district who had undergone through cesarean delivery under spinal anesthesia. Sample size was 100 housewives. Convenient sampling technique was used to select housewives from three government hospitals of Faisalabad district. Data was collected from Children Hospital Faisalabad and mother care centers of Allied Hospital and DHQ Hospital Faisalabad. Study was of 3 months duration conducted from November 2018 to January 2019.

Inclusion criteria

House wives:

- Having childbirth by C section under spinal anesthesia
- Age between 20-50 years
- Who were suffering from low back pain due to C section from 3 months and onward
- Who had a cesarean delivery history in past using spinal anesthesia induced

Exclusion criteria

- Mothers who delivered through vaginal delivery were excluded from study
- Mothers having low back pain due to general anesthesia induced cesarean delivery were not included in study
- If LBP was due to disc bulge/herniation
- LBP due to RTA (road traffic accident)
- Pregnant females having low back pain
- Patient having the history of acute injury to back which could result in pain as an acute inflammatory process
- Patient having any history of active infection like TB of spine etc.
- Low back pain due to any other co-morbidities.

Data collection procedure

A modified questionnaire was used to conduct this study. It was a combination of two standard questionnaires. One was Oswestry low back disability questionnaire and other was Nordic musculoskeletal questionnaire. Pain assessment was done through visual analogue scale (VAS). Those consented to participate were given a consent form. Once they met selection criteria and agreed to take part in study, they were handed out the questionnaire.

Statistical analysis

Statistical analysis was done through SPSS version 23.0. Frequency distribution was used to summarize categorical data and graphs and charts provided a graphical summary. The mean and standard deviation were calculated for quantitative data such as age etc.

The Chi-square test for association between variables such as "severity of low back pain on VAS scale" and "Number of cesarean section deliveries done under spinal anesthesia" was used to establish whether there was association between both of these variables. Chi square was also used to observe the association between prevalence of chronic LBP and history of backache in previous pregnancy, history of back ache at the time of previous epidural anesthesia administration, daily activities (working and standing hours) of a housewife in a day.

Ethical Considerations

- Ethical approval was taken from Institutional Review Board (IRB) Government College University, Faisalabad.
- Written informed consent was taken from study participants.
- Confidentiality of respondents was maintained
- Anonymity and privacy of the data was assured.
- There are no direct benefits of participation in study but study results can drive efforts towards implementation of LBP control practices.
- All the researchers had followed the ethical guidelines given in WMA Helsinki Declaration.

RESULTS

The sample population n=100 showed that 78% housewives were suffering from chronic LBP after C section under spinal anesthesia and 22% were not (Table 1).

Table 2 shows that 21.8% participants were had level of pain on VAS scale ranges from 1-4 which was considered as "mild pain", 44.9% had pain level of 5-7 ranges which was considered as "moderate pain" and 33.3% had 8-10 ranges on VAS scale which was considered as "severe pain". 42.3% reported that their pain become severe while working, 19.2% while bending, 5.1% during lying, 17.9% had severe pain while sitting and 15.4% had severe pain while standing. 64.1% reported that rest made their pain better, while 35.9% felt better by taking medicine. 9% housewives were suffering from low back pain due to C section under spinal anesthesia from less than 6 months, 7.7% were suffering from low back pain from greater than 6 months and less than 1 year and 83.3% were had low back pain from greater than 1 year. 76.9% were had intermittent behavior of pain and 23.1% were suffering from pain constantly.

Table 1: Frequency of low back pain among study participants.

Low back pain	Frequency	Percentage %
Yes	78	78
No	22	22
Total	100	100

Table 2: Characteristics of low back pain.

Serial No.	Characteristics of pain	Classification	Frequency	Percentage (%)
1	Severity of chronic low back pain on VAS scale	1-4	17	21.8
		5-7	35	44.9
		8-10	26	33.3
2	When did the pain become severe?	Working	33	42.3
		Bending	15	19.2
		Lying	4	5.1
		Sitting	14	17.9
		Standing	12	15.4
3	What helps reduce the pain?	Rest	50	64.1
		Medicine	28	35.9
		Sleep	-	-
		Work	-	-
4	From how many days you are suffering from this pain?	<6 months	7	9
		>6 months but<1 year	6	7.7
		>1 year	65	83.3
5	Behavior of pain	Intermittent	60	76.9
		Constant	18	23.1

DISCUSSION

The present study depicted a 78% prevalence of chronic low back pain out of 100 sample size due to cesarean section under spinal anesthesia. The relevant studies that were conducted on mothers having low back pain due to cesarean section under spinal anesthesia revealed the following: a study conducted in August 2018 by Vimala et al., showed that out of 100 sample size, 56% of the mothers were having dull back pain after cesarean section and 14% had low back pain which was long lasting [7].

The intensity of low back pain was differed in all housewives having cesarean section under spinal anesthesia. It was observed that mothers who were having 3 or more than 3 cesarean sections, were suffering from greater severity of low back pain. Out of 78 participants who experienced low back pain due to cesarean section, 62.8% reported that it restricts them from their daily life activities and also it has an effect on their daily life activities.

In the present study, 21.8% reported mild pain, 44.9% had moderate pain and 33.3% had severe pain on VAS scale. According to a study conducted by Vimala et al., (2018), 34% had mild pain, 58% had moderate pain and 8% had severe pain. This is in accordance with the fact that most of the females suffer from moderate level of low back pain after cesarean section under spinal anesthesia [7].

Out of 78% women experiencing low back pain due to C section, the majority (83.3%) mentioned that they were suffering from low back pain from greater than one year. 9% were suffering from LBP from less than 6 months and 7.7% were suffering from low back ache from greater than 6 months and less than 1 year. Persistence of low back ache is common even after six months of delivery in 5 to 40% of parturient [6].

Chronic low back pain after cesarean section can be alleviate by maintaining proper posture while lifting, bending and feeding the baby. Pelvic floor muscles strengthening exercises can also be prescribed to mother. Use footrest while sitting and holding the baby to elevate the feet.do not stand for long periods of time. In case of long standing, place one foot over the footrest or low stool to relieve pressure on the back. Massage the back to soothe or relieve muscle soreness. Hot or cold pack could be placed on painful area to relieve pain. Relaxation techniques can also be applied on low back. In clinical setting, transcutaneous electrical nerve stimulation can also be applied. Mattress of the bed should be plain leveled and not too soft. Pilate exercises are highly recommended as they work directly on abdominal muscles.

CONCLUSION

Results of this study showed that chronic low back pain due to cesarean section under spinal anesthesia occurred in 78% housewives living in Faisalabad. Hence providing further evidence that chronic low back pain due to cesarean section is a phenomenon occurring in most females of all over the world after a cesarean section. The greatest severity of low back pain was reported in housewives who had 3 or more than 3 cesarean sections under spinal anesthesia. The conclusion of postpartum chronic low back pain due to cesarean section in housewives is that it negatively affects a housewife's social life and daily living activities which directly have effects on the quality of life of the housewives.

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CONFLICT OF INTEREST

"None to declare"

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