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STUDY ON PAIN ASSESSMENT, HEALTH RELATED QUALITY OF LIFE AND MEDICATION ADHERENCE IN WOMEN AFTER CESAREAN DELIVERY

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Abstract

Introduction: A woman's and her family's most emotional event is giving birth to a child. Throughout the beginning of human culture, cesarean sections have been practised. It has been used successfully for the entirety of the 20th century and, among the major abdominal procedures, is the oldest and most often practised procedure in obstetrics. Following cesarean deliveries, post-operative pain is a prevalent issue. Since the worldwide medical community determined that a WHO-recommended cesarean section rate should range between 10-15% on April 9, 2015, caesarean sections have increased in frequency in both wealthy and developing nations. According to the WHO statement released today, when the prevalence of cesarean sections increases in a population, the number of mother and infant fatalities declines. A woman's HRQOL postpartum may be affected by socio-demographic factors, clinical factors, and obstetric complications; socio-demographic factors that have been shown to have a negative impact on HRQOL postpartum include black ethnicity, low levels of education, low income, and having more children living at home. By defining health to include emotion and social well-being, the WHO has highlighted the significance of QOL even more. **Methods:** This is a prospective observational study carried out for a period of 6 months involving 166 cesarean delivery women, study site in a tertiary care hospital. Pain assessed by PQAS, VAS and wang bakers face scales. HRQOL assessed using SF12 scale. **Results:** According to the findings of our study, 97 out of 166 individuals felt moderate pain the most frequently, according to this scale's ratings. Mild discomfort was experienced by fewer cesarean women. According to the Wong-Baker scale for assessing pain, 55% of participants describe their pain as being of the mild to moderate. PQAS comprises the unpleasant sensation towards the pain that was detected by the majority of the participants, after which the intensity had the major mean value between the surface and deep pain surface pain was greater when compared to deeper. According to the findings of this study, HRQOL participants have better physical health and less emotional issue interference, while the majority of the women reported feeling tired and depressed, with around 10 of the 166 participants reporting diminished peace of mind and pain interference.

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Introduction

Childbirth is an emotional process for both the mother and her family. Cesarean sections have been practised since ancient times. It has been used successfully throughout the twentieth century, and it is the most common and oldest major abdominal surgery performed in obstetrics globally [1]. C section is a surgical method of delivering a baby through an incision in the mother's abdominal wall and uterus. C section can help women who are at risk of complications avoid risky delivery room conditions and can save a woman's life in an emergency. Pain management can be especially difficult due to various factors, including patients' anticipation of postoperative discomfort and the high patient-to-nurse ratio, Journal of Innovations in Applied Pharmaceutical Science

which restricts pain evaluation and delivery of effective pain relief medicines. The study's primary purpose was to establish the current pain status and treatment following a cesarean surgery [2, 3].

Bridging the gap between disciplines and social, mental, and medical services is possible by emphasising HRQOL as an outcome. Recent federal policy changes highlight the need for HRQOL measurements to enhance the conventional measures of morbidity or mortality used in public health, mortality. Improvement of quality of life was recognised as the primary public health objective in 2000, 2010, and 2020 by healthy people [4-9]. HRQOL postpartum is potentially influenced by socio-demographic parameters, clinical parameters, and obstetric complications; socio-demographic parameters described to have a negative impact on HRQOL postpartum are black ethnicity, low education, low income, and having a larger number of children at home [10-12]. WHO has underlined the significance of QOL even further by integrating emotion and social well-being in the definition of health. A supportive social network has a beneficial impact on postpartum HRQOL. The effect of delivery modality on HRQOL appears to be equivalent

or impaired following cesarean section compared to vaginal birth, according to the research. HRQOL in our study was measured using SF12 [13-15].

Medication adherence, also known as accurate drug administration, is commonly described as the amount to which patients take medicine as recommended by their doctors. Medication adherence, or taking your prescription as recommended, is critical for managing chronic diseases, treating transitory ailments, and general long-term health and well-being. A personal relationship with your doctor or chemist is essential for medication adherence. Medication adherence calculated using the Morisky Medication Adherence Scale [15-22].

Study Methods

Study Design

A prospective observational study looked at pain, health-related quality of life, and medication adherence carried out in a Tertiary care hospital from October 2021 to March 2022 for a period of 6 months among 166 women following cesarean surgery. The study was carried out after the Institutional Ethics Committee approved it and the subjects provided informed permission. Exclusion and inclusion criteria were used to screen subjects. The study only included patients who met the inclusion criteria. In each participant socio-demographic details like age, occupation, education, number of children before c-section, BMI and number of deliveries collected. Data was gathered in the defined data collection form after the individuals were included in the study. Patients were asked pain-related questions (through the pain quality assessment scale (PAQS)). The SF12 questionnaire scale was used to collect HRQOL questionnaires. The morisky scale was used to assess medication adherence. After a week, all of the women were checked in to see how they were doing. Later evaluation pain and HRQOL was carried out. Inclusion criteria is women having the age above 18 years and who had undergone c section. Exclusion criteria is women who had normal delivery and women with other diseases which had symptomatic pain.

Study Operation

PQAS was used to assess pain which is 20 questionnaire scale, VAS scale is used to see pain is mild (0-4) moderate (4-7) and severe (7-10). SF12 questionnaire to measure QOL. Moriskey scale used to calculate number of women are adhered to their medications.

Sources of Data

Data extracted from the inpatient and outpatient files of obstetrics department at tertiary care hospital. We described the study to patients and patient representatives, and those who are willing to submit informed permission forms for our study are considered.

Results

PAIN

In our study we included 166 women after cesarean section. As per PQAS quality of pain is as following

S. no	Description	Total score	mean
1	Intensity	732.0	4.409
2	Sharpness	356.1	2.145
3	Hotness	266.8	1.607
4	Dullness	400.9	2.415
5	Freezing	98.78	0.595
6	Sensitive (raw skin)	365.34	2.200
7	Tender (bruise)	609.2	3.669
8	Itching	101.12	0.609
9	Shooting	300.23	1.808
10	Numbness	466.21	2.808
11	Sparking/lightning	125.2	0.754
12	Pricking/tingling	300.34	1.809
13	Squeezing/cramping	250.2	1.507
14	Radiating	53.02	0.319
15	Pounding	303.32	1.827
16	Aching	565.7	3.407
17	Heaviness	23.0	1.403
18	Unpleasant sensation	734.3	4.423
19	a. Deep pain	489.0	2.945
	b. Surface pain	328.32	1.977
20	Stability of pain	396.32	2.387

By using the Pain Quality Assessment Scale the following scores were obtained as; in the overall 166 women's the assessing parameters includes the Intensity with the total score as 732.0 and the mean as 4.409; Sharpness with the total score as 356.1 and the mean as 2.145; Hotness showed by patients with the total score of 266.8 and the mean as 1.607; Dullness with the score as 400.9 and the mean as 2.415; Freezing with the score as 98.78 and the mean as 0.595; sensitivity towards pain showed by the sample score as 365.34 and the mean as 2.200; Tenderness among population had the total score as 609.2 and the mean as 3.669; Itching had the less score as 101.12 and the mean as 0.609; Shooting with the score as 300.23 and the mean as 1.808; Numbness with the score as 466.21 and the mean as 2.808; Sparking or Lightning with the score as 125.2 and the mean as 0.754; Pricking or Tingling with the score as 300.34 and the mean as 1.809; Squeezing or cramping with the score as 250.2 and the mean as 1.507; Radiating with the score as least as 53.02 and the mean as 0.319; Pounding with the score as 303.32 and the mean as 1.827; aching with the score as 565.7 and the mean as 3.407; Heaviness with the score as 23.0 and the mean as 1.403; Unpleasant sensation with the score as 734.3 and the mean as 4.423; Deep pain with the score as 489.0 and the mean as 2.945; Surface pain with the score as 328.32 and the mean as 1.977; Stability of pain with the score as 396.32 and the mean as 2.387.

Health Related Quality of Life

SF12 scale score for HRQOL is as following

S.no	Characteristics	Mean	Standard deviation
1	General health (physical activity)	2.830	0.4102
2	Moderate activity	1.516	0.6188

3	Several activities	1.039	0.2260
4	Interruption to daily work(due to physical health)	1.052	0.4102
5	Interruption to daily work(physical)	1.156	0.5515
6	Interruption to daily work(emotional)	1.130	0.4959
7	Interruption to daily work(emotional)	1.196	0.3983
8	Pain interference	2.869	0.6948
9	Peace of mind	3.111	0.8926
10	Lot of energy	4.29	1.117
11	Down hearted	4.588	0.8314
12	Interference social activities	2.862	0.8665

By using the SF -12 Questionnaire from the 12 questions for the scores Mean & Standard Deviation (SD) were calculated. Mean of the general health was 2.830 and the SD as 0.4102; Mean of the moderate activity was 1.516 and the SD as 0.6188; Mean of the doing several activities (like moving table, lifting any weight etc) was 1.039 and the SD as 0.2260; Because of physical health any interruption to daily works had like accomplished less than they would like had the mean as 1.052 and the SD as 0.4102 and other had any limitation of other activities had the mean of 1.156 and the SD as 0.5515; Because of emotional problems interruption to accomplished less than they done had the mean as 1.130 and the SD as 0.4959; and the works doing less carefully than usual had the mean of 1.196 and the SD as 0.3983; interference of pain had the mean as 2.869 and the SD as 0.6948; peace of mind had the mean of 3.111 and the SD as 0.8926; Lot of energy had the mean as 4.29 and the SD as 1.117; Felt down-hearted and blue had the mean as 4.588 and the SD as 0.8314; pain interference to social activities(like visiting friends and relatives etc..) had the mean as 2.862 and the SD as 0.8665.

Medication Adherence

S.no	Type of adherence	No.of population	Percentage
1	Low adherence(0)	0	0%
2	Medium adherence(1or2)	106	69.2%
3	High adherence(>2)	47	30.7%

Adherence of patients towards medicine in the prescription; the adherence was discovered as there were no women with poor adherence and around 106 women with medium adherence towards the prescription with a percentage of 69.2% and 47 women were discovered with high adherence with a rate of 30.7%, adherence to the medication.

Discussion

- This study included 166 women who underwent a Cesarean section.
- Pain assessment was carried out by using three scales numerical, visual and quality assessment scale. Numeric scale was simple to apply and participants

- showed a good understanding acceptance of it. From this scale scores maximum frequency had the moderate pain at about 97 participants out of 166. Less percentage of mild pain in the cesarean women. Wong –Baker pain rating scale shows the major percentage as 55% having the type as little more hurts, by this scale the decision purely by the participant based.
- Quality of pain assessment by PQAS includes the unpleasant sensation towards the pain had noticed by most of the participants, after that the intensity had the major mean value between the surface and deep pain surface pain was more pain when compared to deeper one. There was less indication of freezing, radiating, itching and lightening effect of pain.
- Quality of pain is a broad term; HRQOL encompasses several domains of life directly affected by changes in health. In this study HRQOL was measured by SF-12 method. From this study participants have the effect on more physical health and less emotional problem interference and most of the women were feeling like lack of energy to do normal work and down hearted, also some of the participants like about 10 of 166 said reduced peace of mind and pain interference with the normal activities, related to general health most of the patients said feeling good about their health but not very good.
- Poor adherence is directly linked to patient behavior; there is no definitive data that had defined a non-adherent personality or revealed a relationship between adherence and the ability to follow self-care or life style recommendations.

Conclusion

From this study we states that age had less interfering the pain, having education women with or without occupation had the experience of more pain than women without education and who are doing informal employment. Even though there is no difference between the primipara and multipara women about their expression of pain, primipara women were shows the little bit of severe pain than multipara women.

From this study pain interference mostly on physical health rather than emotional problems, they had less physical activity because of pain, for that we want to told about the use of simple body movement works like walking, enjoying music, reading interesting stories, talking with their loved ones etc with some precautions. The unpleasant pain and intensity was slowly decreased.

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Conflict of Interest

Authors are declared that No Conflict of Interest

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Not Applicable

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Author Contribution

All authors are contributed equally.

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