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Original Research Article

Prevalence of back-pain following caesarean section under spinal anesthesia

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ABSTRACT

Back pain following a caesarean section is a typical complaint. It has been statistically proven that more than 70% of cases, or 7 out of 10 women who give birth, endure back pain. If it is not treated at the appropriate time and with adequate measurement, the back pain may worsen in the future. A systematic literature search was performed to determine the prevalence and factors associated with back pain among patients undergoing spinal anesthesia. Many studies have attempted to determine risk factors for back pain after birth in different populations, using different methods and outcome variables. Data were collected from PubMed, Google scholar and the medicine and nursing database. Back pain that persists after a caesarean delivery is brought on by a number of circumstances. Post-partum back pain is linked to a history involving pre- and post-pregnancy back pain, obesity, bad posture while nursing, sitting, walking, and standing are the contributing factors. The study results show that by maintaining posture correction, yoga, meditation, lumbar support, rest and massage helps to alleviate post anesthetic back pain. This study confirms that the overall incidence of back pain is high in comparison to the majority of studies. The severity of back pain caused by spinal anesthesia is highly connected to the size of the spinal needle, body mass index, and number of attempts, body posture and number of bone contacts.

Keywords: Backpain, Caesarean section, Delivery, Postpartum, Post anesthetic

INTRODUCTION

Research shows that 80% of adults experience a minimum of one episode of back pain throughout their lives.¹

In 2018, 31.6% of women aged ≥ 18 years had lower back pain. Low back pain usually involves muscle spasm of the supportive muscles along with the spine. Back pain is one of the most common problems during the postpartum period.¹

Analyzing the reasons, spinal anesthesia can be one of the reasons for low back pain due to the type of needle used and the duration of the surgery.² The main purpose of this

study was to determine the prevalence of back pain among postnatal mothers who underwent caesarean section.³

The findings of this study can be the basis for formulating policy regarding the prevention and treatment of LBP in a large part of the global population.⁴

Types of back pain

There are different types of backpain after giving birth either normal vaginal delivery or caesarean delivery postpartum lower backpain, postpartum coccyx pain (tailbone), posterior pelvic pain, upper backpain and backpain after the caesarean section.⁵

Postpartum lower backpain

After the delivery, the woman gets lumbar pain which affects the lower part of the spine, middle and around the lower region of the back. It spreads down to the legs and while sitting for a long time the pain is intensified.

Postpartum coccyx pain

Around the sacral area, the base of the spine gets localized sharp pain which is called coccydynia. It causes severe pain and sitting on a chair is impossible.

Posterior pelvic pain

This posterior pelvic pain is felt in the back of the pelvis, often extends down into the buttocks and thighs but does not spread to below the knees. This may be aggravated by walking, climbing stairs or standing up from a sitting position.

Upper backpain

This type of pain is common after birth due to the increase in breast size, carrying the baby around, maintaining poor posture while breastfeeding.

Backpain after the caesarean section

Mothers getting back pain after caesarean section are common due to involution of the uterus to its normal size and strain on the uterus, the abdominal region and the pelvic floor as well.⁵

Causes of backpain

Back pain is one of the most nerve-racking conditions which arise when recovering from surgery.⁶

Hormonal changes

During pregnancy, the ovary and the placenta release a hormone relaxing in preparation for delivery to relax the ligaments in the pelvis which in turn softens and widens the cervix for delivery.

Relaxing is released when patients undergo normal vaginal delivery or caesarean section. The relaxed joints and ligaments get easily strained even by very slight activity which cause back pain.

Lifting and carrying the baby or posture

After caesarean delivery back pain is common due to carrying the weight of a healthy baby strains the lower and mid-back region and so much of the weight in the abdominal region may stress up the spine. These extra movements can impact the posture, hence causing back pain.

Breastfeeding

Bad posture during breastfeeding like bending, drooping shoulders, strained or lowered neck can also eventually result in backpain.⁶

Impact of anesthesia

The spinal cord is a bundle of nerves connected internally all over the body and surrounded to the spine. These spinal nerves are responsible for the transmission of pain signals through the brain to the entire body, so anesthetics are used to block these nerves temporarily to induce anesthesia to avoid pain. Spinal anesthesia is a type of neuraxial anesthesia which is injected into the cerebrospinal fluid in the lumbar spine to anesthetize nerves that exit the spinal cord.⁷

Due to spinal anesthesia, the back pain has been attributed to tears in the ligaments, fascia, or bone with localized bleeding; immobility of the spine; relaxation of the paraspinal muscles; flattening of the normal lumbar convexity; stretching and straining of the lumbosacral ligaments and joint capsules.⁸ Up to 90% of women who had a caesarean section under spinal anesthesia have back pain.⁹

The study identifies that the type of surgery, duration of surgery and position during surgery are the main risk factors for patients undergoing surgery with spinal anesthesia.

Anesthetic agents help relax the entire body. Due to the relaxation of the para spinal muscles, over flattening of the lumbar curve occurs especially if the surgery lengthens for more than 40 minutes either in supine or lithotomy position. This over flattening of the lumbar curve can cause post-operative backache. Hence ILS helps in supporting the lumbar area thereby reducing the over flattening and lessening the postoperative pain.¹⁰

Prevention/ home remedies for back pain

Take rest

After doing of physical activity would worsen the strained muscles and can cause increased backpain.¹¹ Taking rest throughout the day is useful as it helps the body to recover and gives few extra hours of rest, especially when the baby keeps up her at night.¹²

Comfortable position

Maintaining a comfortable position while sitting with the baby for hours, using pillows under the back, below the baby, under the arms, and behind the shoulders, keeping weight distributed evenly between the hips and avoiding sticking one hip out to the side to lessen the load placed on the back helps in reducing the back pain.

Avoid bending over

Posture correction should be made.

Keeping the back straight whenever required and leans with the knees or legs to avoid back pain. The back should be straight while breast feeding, find a comfortable spot to feed the baby to maintain proper posture of the neck, spine/back.¹¹

Perform gentle exercises

Starting with simple exercises and activities like breathing exercise and yoga which strengthens the body thus, the muscle tension in the back would be relieved. A light walk would also improve the blood circulation and reduce the back pain.

Take a hot bath

Taking a hot bath reduces spasms and muscle tension in the back, increase blood circulation, reduce inflammation, and alleviate backpain.¹¹ Adding rock salt to the hot bath reduces pain and soreness.¹²

Massage

A back massage helps to reduce muscle tension, relax muscle spasms and enhance increase blood circulation which relieves pain.

Physiotherapy

To cope up with the pain, physiotherapy can be an effective option to overcome this condition and improves the quality of life.¹²

Pain medication

In case of severe pain, the doctor is consulted to take medications to alleviate pain and to be safe for the baby.

Stand smart

Good posture can reduce the stress on back muscles so maintain a neutral pelvic position.

Sit smart

Choosing a seat with good lower back support, placing a pillow or rolled towel at the back to maintain its normal curve, keeping knees and hip level and changing the position frequently at least every half an hour reduces the back pain.

Lift smart

Avoid heavy lifting, suppose lifting something heavy let the legs do the work and hold the load close to the body.⁵

METHODS

The studies which had quantitative data were included whereas qualitative or mixed method studies were excluded from this study. The included studies were studied of women who underwent a C-section under spinal anesthesia and who experienced post-spinal back pain for a variety of reasons. There was no restriction on diagnosis, age and ethnicity.

This study was used a detailed search strategy. To gather information related to the low backpain after caesarean section, a literature review using search of electronic database was conducted. Data were collected from Pub med, Google Scholar and the Medicine and nursing database. This investigation utilized search terms that included both medical subject headings and key words.¹³

Using Boolean operators, 'And', the study sought to gather information on post-spinal back ache, causes of back pain, types of back pain, and caesarean delivery. The chapters of this literature exclude studies that were not in English, low back pain in women who give birth through vaginal delivery. All the studies that were not in compliance with the inclusion criteria and were not relevant were removed. Data of the study were extracted from various studies to identify studies focused on the risk factors for persistent pain after childbirth, prevalence of backpain and its impact on quality of life, chronic post-operative pain after anesthesia.¹⁴

RESULTS

According to the study articles, 80% of post-operative women experience back discomfort at some time in their lives.¹⁵ Back discomfort affects 56.67% of women who had caesarean sections. More than 70% of cases of post-caesarean back pain result in back pain, which indicates that 7 out of every 10 women who give birth experience back pain. It is a significant matter of public health.¹⁶ Lifetime prevalence of LBP in India was 48%. It is higher compared to global and other ethnic populations especially among women.¹⁶

There are several factors which contribute to back pain after caesarean section. The abdominal muscles during pregnancy being stretched to their limit and the back muscles being constantly tight to compensate for weak abdominal muscles.¹⁷

The root cause for this back pain is found to be that women are not maintaining the neutral position after the surgery due to various reasons like improper posture during breast feeding, standing, walking, and sitting.

One of the studies prove that due to over flattening and stretching of the lumbar curve during caesarean section under spinal anesthesia has a great impact on backpain.¹⁰ Treatments include exercise, postural correction, rest, massage and lumbar support.

DISCUSSION

Until now many factors were thought to be responsible for the incidence of post-operative back pain but the study clearly states that the post-operative back pain for caesarean mothers occur due to the type of anesthesia, size of the needle, hematoma, excessive stretching of the ligaments, acute spasm of muscles, duration of surgery and obesity of the mother.¹⁴

The pain caused mainly due to the spinal anesthesia which fades away in a couple of days to a week. But in a few cases, the pain tends to persist for multiple weeks, even months. The primary reason for this may be an acute spasm of muscles of the spinal region. The study shows that the quality of life is higher in women without back pain as compared to those with back pain. However, women underwent caesarean section show a lesser quality of life compared to those with normal vaginal delivery. From this understanding, many efforts have been made to reduce the incidence of post spinal backpain.¹⁸

CONCLUSION

The study reveals that there are various factors which contribute to the post spinal back pain. Along with the different interventions like using a lumbar support and yoga therapy, the posture correction during feeding, sitting and walking, also helps to prevent back pain.

Recommendation

Healthcare professionals can use this as evidence as a support in providing proper health literacy to their patients after childbirth to manage their back pain. Based on this research outcomes further study can be planned. Studies can be conducted on different pain controlling therapies.

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REFERENCES

- Joshi S, Parikh S. Prevalence of low back pain and its impact on quality of life in postpartum women. Int J Recent Scientif Res. 2016;7(11):14342-8.
- ealth. Parashospitals.com. 2023. Available at: <https://www.parashospitals.com/blogs/ba>. Accessed on 04 July 2023.
- Tariq S, Afzal A, Abid S, Ans M, Jabbar S, Azam S, et al. Prevalence of Chronic Low Back Pain Due To Cesarean Section Under Spinal Anesthesia Among The Housewives in Faisalabad District. Biol Med. 2020;12:472.
- Shetty GM, Jain S, Thakur H, Khanna K. Prevalence of low back pain in India: A systematic review and meta-analysis. Work. 2022;73(2):429-52.
- Koala Baby care. Postpartum back pain: causes and advices, 2020. Available at: <https://koalababycare.com/blogs/koalavibes/postpartum-back-pain-causes-and-advice>. Accessed on 04 July 2023.
- First cry. Back Pain After C-Section – Causes and Remedies, 2022. Available at: <https://parenting.firstcry.com/articles/backaftectection-causes-and-remedies/>. Accessed on 04 July 2023.
- De Leon AM. Spinal anesthesia: Technique, 2022. Available at: <https://www.uptodate.com/contents/spinalanesthesia-technique>. Accessed on 04 July 2023.
- Benzon HT, Asher YG, Hartrick CT. Back Pain and Neuraxial Anesthesia. Anesth Analg. 2016;122(6):2047-58.
- Vinmec. Back pain after caesarean section: What you need to know, 2023. Available at: <https://www.vinmec.com/en/news/healthnews/obstetrics-gynecologyandassistedreproductivetechnologies-art/back-pain-after-caesarean-section-need-to-know/>. Accessed on 04 July 2023.
- Sindhu B, Sanatombi DE, Chakrabarty J. Effectiveness of inflatable lumbar support (ILS) for the prevention of short term backache among post-operative female patients undergoing lower abdominal surgery under spinal anesthesia. Int J Nurs Edu. 2015;7(1):78-80.
- Physiotattva. How to Reduce Back Pain After C - Section and Pregnancy, 2023. Available at: <https://www.physiotattva.com/blog/pain-aftersection>. Accessed on 04 July 2023.
- Physiotattva. 8 Best Ways to Reduce Back Pain After C- Section and Pregnancy, 2023. Available at: <https://www.physiotattva.com/blog/pain-aftersection>. Accessed on 04 July 2023.
- Komatsu R, Ando K, Flood PD. Factors associated with persistent pain after childbirth: a narrative review. British J Anaes. 2020;124(3): e117-30.
- Adinda P, Pradhana, Aryasa T, Putra Pradhana A, Ryalino C, Gusti I, et al. Post-spinal Backache After Caesarean Section: A Systematic Review, 2023. Available at: <https://website.anestesiudayana.com/wpcontent/uplo ads/2022/06/77>. Accessed on 04 July 2023.
- Nagalakshmi J. A study to assess the effectiveness of lumbar support in reducing lower back pain among women undergone caesarean section at Institute of Obstetrics and Gynaecology, Egmore, Chennai, 2014. Available at: <https://www.semantic-scholar.org/paper/atNagalakshmi/ba11c053db50be5486576559593067 a11c00b3e3>. Accessed on 04 July 2023.
- Thenmozhi P. Assess the Level of Back Pain among LSCS Mothers. SSRG Int J Nurs Health Sci. 2016;2(4).
- Ahirwar A. The Prevalence Of Complications After Spinal anesthesia: A Cross Sectional Observational Study In Bundelkhand Popular. Int J Scientif Res. 2022;11(10).

18. Zeleke TG, Mersha AT, Endalew NS, Ferede YA. Prevalence and Factors Associated with Back Pain among Patients Undergoing Spinal Anesthesia at the University of Gondar Comprehensive and Specialized Hospital, North West Ethiopia: An Institutional Based Cross-Sectional Study. *Adv Med.* 2021;2021:1-8.

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