

Effect of Early Ambulation versus Late Ambulation on Quality of life in Subject Post Caesarian Section- An Experimental study

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INTRODUCTION

Globally there are wide geographical variations in caesarean section rates but almost all show a rise, quadrupled in less than two decades.[1] The estimates of CS rates in India was 7.1 per cent in the year 1998 and there is 16.7 per cent change in the rates annually in India (Stanton, 2006), which is one of the highest among the countries.[2] In daily activities the health of mother and the infant is important for health care system, today cesarean section is a common surgery performed in developing countries. It is not performed as a last resort, but as a safe alternative to risky vaginal delivery. And the due consideration is given not only to immediate safety of mother and newborn, but also to remote obstetric future.[3] Deliveries through Caesarian are steadily increasing in India raising doubts on whether doctors are needlessly exposing women and infants to surgical risks.[4] In India various studies reveal doubling or tripling of rates in short span. In Aug 2008 the article published by IBN Live on caesarean section states that India is one of the few countries where more than 50% of woman opt for CS, as opposed to vaginal delivery. Many woman request doctor to perform CS for non medical reasons like fear of pain, seeking auspicious date and timing of delivery and other personal reasons.

[5] The factors associated with caesarean section are age, parity, multiple pregnancy, maternal weight gain, and birth weight. Including these factors the caesarean section is justified under certain circumstances such as cephalo pelvic disproportion and contracted pelvis, dystocia due to soft parts, inadequate uterine forces, ante partum hemorrhage, preeclampsia toxemia, eclampsia, fetal distress and prolapse of the cord, malpresentation, maternal distresses such as heart problems, bad obstetric history, habitual intrauterine death of the fetus and elderly primigravida. Except these demographic and medical reasons the patient request and the physician factor are playing a major role in increasing caesarean section rates. As caesarean section is less painful and less time consuming the patients request the obstetricians to perform the caesarean and in case of the physicians it is also much more convenient and quick than attending a normal vaginal delivery. In India giving birth in an auspicious day are driving the women to go for a caesarean section.[6] Although the caesarean section is recommended safe when vaginal delivery put the baby's and mothers life or health at risk, the surgery carries many risks, including immediate and late complications. Despite the life saving advantages, there are several adverse consequences of caesarean delivery for women and to their households. The use of caesarean delivery in unwanted circumstances creates risks to the mother's health and leads to inefficient use of resources (Millennium Development Goal 2003). The risks may be intraoperative as well as postoperative complications. Most common postoperative complications are pneumonia, atelectasis, thromboembolism, infection, urinary tract infection and paralytic ileus and serious sociopsychological damage in cases caesarean section was done without any medical and obstetric indication. The rate and risk of these complications increases due to the increasing incidence of caesarean section mainly in countries like India.[7] The woman undergone cesarean section has more problems, minor or major, than that of a woman with vaginal delivery. Some of these are longer duration of hospital stay, postoperative pain, delayed ambulation, increased period required to return to normal meals, breast engorgement, urination problems, problems in relation to bowel movements, lactation failure, and less maternal newborn bonding. The patients recovering after abdominal surgery may limit their activities due to pain or fatigue interfering with their ability to regain their previous level of functioning.[8] Mothers with a caesarean section delivery are less likely to room in with their babies, less likely to continue breastfeeding and more likely to experience health concerns post delivery, including abdominal pain, bladder and bowel difficulties, headache and backache. It was evident that there is increased risk of possible postoperative complications following caesarean section; therefore prophylaxis is essential.[9] By preventive and promotive postoperative care the women can be helped to avoid the postoperative problems and complications, which can help in early recovery. One of the important aspects of comprehensive postoperative care can be planned early ambulation. Planned early ambulation means that patients can be out of bed as early as possible based on type of surgery. For caesarean section this period can be as less as 6-8 hrs after caesarean section, or can be 1 or 2 days after operation. The early ambulation leads to less fatigue, better healing of muscles, fewer "sick man complexes", no bowel and bladder complaints, eat better, sleep better and feel better. There are even earlier reports on the physiological advantages of early ambulation and disadvantages of prolonged bed rest.

Early ambulation after surgery as a newer concept raises medical interest and enthusiasm. The goal of this concept is to optimize the postoperative management of the patient in order to reduce morbidity, to enhance recovery of the patient after a surgical procedure, to reduce hospital stay and to reduce the costs.[10]

MATERIAL AND METHODOLOGY:

- Study Design : Experimental study
- Study Type: Comparative Study
- Study Setting: Obs-Gyn Ward, Dr. D. Y. Patil Medical College and Hospital, Pimpri, Pune
- Sampling Technique: Simple Random Sampling
- Study Duration: 1 Year
- Sample size formula

$Z_{\alpha/2} \sqrt{P(1-P)}$

$n =$

$\frac{d^2}{Z^2}$

Where;

$(Z_{\alpha/2})^2$ is the level of significance at 5%. i.e 95%

Confidence interval =1.96

P = Prevalence of pelvic floor dysfunction and diastasis recti in postpartum female = 4.8% i.e 0.048

D = Desired error of margin =7% i.e 0.07

$n = 1.96^2 \times 0.048 \times (1 - 0.048)$

0.07^2

$n = 35.82$

$n = 40$

- Sample size: 40
- Sampling Method: Subjects were randomly allocated by chit method and assigned in two group i.e Group A and Group B in equal number.
- Group A (12 hour Ambulation Group) – 20 patients Post caesarean section, Primi gravida were included in the study,. They were given Isometric exercises for hamstrings, quadriceps, deep breathing exercises and ambulation 2 laps post 12 hours of caesaream section
- Group B (24 hours ambulation Group) - 20 patients Post caesarean section, Primi gravida were included in the study,. They were given Isometric exercises for hamstrings, quadriceps, deep breathing exercises and ambulation 2 laps post 24 hours of caesaream section.

Outcome Measure

SF 36 – 36 item short form survey

Result

Female

Group	Mean	SF-36 score	Standard Deviation
Group A	67(51.54%)	81.80	3.50
Group B	63(48.46%)	81.01	3.06

t-value 1.36,p-value=0.19, Not Significant,p>0.05

DISCUSSION

Early ambulation has a good impact on the physical as well as psychological health of individual. Based on the venous blood return as well as the change in environment, a status of physical well being is achieved. [12] In this study we found that early ambulation helps in improving the quality of life. Post C- sessions female suffer from bowel and bladder incontinence, sitting as well as breast feeding. Because of pain patient had difficulty in performing activities of daily living. This study concluded that the planned early ambulation was effective in improving the activities of post caesarean patients in relation to self care and care of newborn. Right from the second post caesarean day, the significant difference was noted in the selected postcaesarean activities of patients with caesarean section; and it was evident throughout the days of assessment. This result is in accordance with the study done in year 2005 by Lin P., Wang R. on „Effectiveness of early ambulation on postoperative recovery and activities of daily living (ADL)“. A randomized controlled study conducted between January and august 2001, on patients“ undergone abdominal surgery. Patients were randomly assigned in experimental group 30 and control group 30. Result showed that, experimental group experienced a significant decrease in morbidity as well as significant improvement in ADL as compared to control group. Thus it could be concluded; early ambulation is effective strategy to improve ADL in patients with abdominal surgery.[13] The study done in 2006, Houborg KB, Jensen MB conducted study on “Postoperative physical training following abdominal surgery” also shown the similar result like present study. In which 60 colorectal surgery patients were undertaken. Physical training and progressive ambulation was given to the experimental group and routine care was given to control group. The outcome was measured in terms of fatigue, muscular strength, walking speed and physical performance test. The result shown that, physical training and progressive ambulation was effective to improve postoperative physical functions.[14]

CONCLUSION

This study was conducted to check the effect of early ambulation post cesserain section. In this study we conclude that early ambulation has a positive effect on improvement of quality of life in subjects post C- section.

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