

**Effect of Foot and Hand Massage on
Relieving Post Cesarean
Section Pain**

Thesis

**Submitted for Partial Fulfillment of The Requirements of
Doctorate Degree In Nursing Sciences
(Maternity and Neonatal Nursing)**

By

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SUMMARY

Pain is a common phenomenon after cesarean section. Unrelieved post cesarean section pain can cause physical complications, delayed recovery, chronic pain, diminished mothers ability to breastfeed and care for their infants, negative birth experience, and mothers' dissatisfactions. Although using analgesics is usual to relieve pain, its complication and ineffectiveness of using it alone has focused today's nursing system on non-pharmacological interventions such as foot and hand massage. The stimulation of the foot and hand activates the responses of the gate control mechanism and hyper stimulation analgesia, with activation of the parasympathetic autonomic nervous system. Body wide effects are the result. This fact alone is helpful in explaining the benefits of foot and hand massage. In addition, many nerve endings on the feet and hands correlate with acupressure points, which trigger the release of endorphins and other endogenous chemicals when stimulated.

Aim of the study

The aim of this study is to assess the effect of foot and hand massage on relieving post cesarean section pain. This aim was achieved through:

1. Assessment of post cesarean section pain level among mothers

Acknowledgement

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LIST OF ABBREVIATIONS

NSAID	Non Steroidal Anti Inflammatory Drugs
ACP	American College of Physicians
NVSS	National Vital Statistics System
AIDS	Acquired Immune Deficiency Syndrome
HIV	Human Immunodeficiency Virus
C.S	Cesarean Section
NICE	National Institute for Health and Clinical Excellence
ACOG	American College of Obstetricians and Gynecologists
VBAC	Vaginal birth after cesarean section
IASP	International Association for the Study of Pain
ASA	American Society of Anesthesiologists
PCA	Patient Controlled Analgesia
POP	Post Operative Pain
TENS	Transcutaneous Electrical Nerve Stimulation

EEG	Electroencephalography
TCM	Traditional Chinese Medicine
WBC	White blood cells
RBC	Red Blood Cells
DVT	Deep Venous Thrombosis
ASRN	American Society of Registered Nurses
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
AHRQ	Agency for Healthcare Research and Quality
APS	American Pain Society.
WHO	World Health Organization
ANA	American Nurses Association
SLDP	Schaffer Library of Drug Policy
AUK	Anaesthesia United Kingdom
BDB	By Design Bodywork
CAPI	California Advanced Pain Institute
JAPTR	Journal of Advanced Pharmaceutical Technology & Research

Abstract

The present study aimed to assess the effect of foot and hand massage on relieving post cesarean section pain. **The study hypothesis:** foot and hand massage has a positive effect on relieving post cesarean section pain. **The study design:** An intervention study conducted at Ain Shams University Maternity Hospitals. **The study sample** involved 150 mothers, divided into 75 mothers as control group who received post cesarean section hospital routine care for pain relief and 75 mothers as intervention group who received foot and hand massage during 20 minutes for pain relief. **The sample type** is a systematic random sample. **Tools of data collection** included: A structured Interviewing Questionnaire, Numerical Rating Scale, Likert Scale and Modified McGill Pain Questionnaire Short Form. **The main results** of the study revealed that a significant improvement of pain level among intervention group compared to control group at different assessment times ($p < 0.001$), that lead to a high satisfaction regarding pain management among mothers in intervention group than in control group. Findings indicated that the most mentioned descriptors of pain among the study group mothers were cramping, throbbing, cutting, aching and pulling. The most prominent factors aggravation pain were turning in bed, sitting, standing and walking in the study group. Also, more than half of control and less than half of intervention groups reported that, they had information about post cesarean section pain relief measures. **The study recommended** designing health educational training program for nurses about foot and hand massage as it is an inexpensive pain relief measure, with no harm to mothers. In addition, there is need for further study to investigate health team attitude regarding this method.

Keywords: Post Cesarean Section Pain, Pain Relief Measure, Foot and Hand Massage.



INTRODUCTION

INTRODUCTION

Cesarean section (C.S) is the birth of fetus through a trans abdominal incision in the uterus. It is one of most common surgical procedure worldwide. It has played a major role in lowering both maternal and perinatal morbidity and mortality rates during the past century. The initial purpose of the operation was to preserve the life of the mother with obstructed labor and her newborn (*Gibbs et al., 2008*).

There are various ways to classify indication of cesarean section. Indications are absolute or relative, common or uncommon, maternal and foetal. The absolute indication include sever cephalopelvic disproportion, major degree of placenta previa, cancer cervix, vaginal atresia, transverse lie, and previous history of classical cesarean scar while, the relative one are fetal distress, antepartum haemorrhage, cervical dystocia, pregnancy induced hypertension, cord accident and intra uterine growth retardation (*Gupta, 2007*).

Cesarean section is a prevalent operation that accounted for up to 32% of deliveries in the United States in 2007 (*Menacker & Hamilton, 2010*). In Egypt, a significant rise in C.S deliveries occurred for all births. Hospital-based C.S increasing to 22% in 1999-2000 (*Khawaja et al., 2004*). In the Maternity Hospital of Ain Shams University, cesarean delivery rate is accounting 30.8% of all deliveries (*Nabhan, 2008*).

Postoperative pain is a complex response to tissue trauma that stimulates hypersensitivity of the central nervous system (*Franz, 2009*). It is important to highlight that the woman who had a cesarean section presents a particular condition after the operation when compared to the clients who went through other surgical procedures. As she needs to perform more activities in order to take care of the newborn and herself, therefore, she is subjected to more pains in the surgical section location (*Sousa et al., 2009*).

Postoperative pain is one of the most common therapeutic problems in hospitals. It can increase morbidity leading to reduced breathing and cough suppression, facilitating retained pulmonary secretions and pneumonia, and delaying normal gastric and bowel function, and thus contributing to a longer recovery period. Lengthen hospital stays and costs, and interfere with a patient's return to activities of daily living. Strategies aimed at reducing postoperative pain increase patient's comfort and can shorten hospital stay and achieve cost effectiveness (*Stacy et al., 2010 & Shaw et al., 2011*).

Karlstrom et al. (2010) reported that, women undergoing caesarean section with high pain levels are in special need of attention and care because of a higher risk of a decreased ability to breastfeed and to take care of their newborn. *Kainu et al, (2010)* added that, persistent pain is more common one year after cesarean section and the women with persistent pain recalled significantly more pain on the day after