Family support and the healthcare workforce when the patient chooses a cesarean section on maternal and neonatal outcomes

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Abstract

**Background:** Childbirth is a series of pregnancy processes that end with the expulsion of the products of conception. The number of births with SC is increasing every year. In Indonesia, the incidence of cesarean section in 2009 has reached 29.6%. This number certainly affects the mortality and morbidity rates in subsequent deliveries.

**Purpose:** To identify family support and the healthcare workforce when the patient chooses a cesarean section on maternal and neonatal outcomes

**Method:** A case study with TOLAC (Trial of Labor After Cesarean Delivery) is a planned effort to give birth vaginally by a woman who has had a previous SC delivery. Women’s perceptions related to pregnancy to delivery can influence the choice of the desired delivery method.

**Results:** Women 31 year old with G3P1011 assisted since 17-18 weeks of gestation. Had an obstetric history with 1x caesarean section in 2016 because there was no progress in labour. Early referral planning has been carried out. Termination of pregnancy by sectio caesarea is planned at 38-39 weeks of gestation. Since the beginning of the pregnancy, the mother wanted to give birth vaginally, but the mother did not get support from her husband or family. Before the intervention was carried out, the mother experienced signs of labor and the mother wanted to try vaginal delivery but was not supported by healthcare workforce and a cito SC was performed. The baby was born healthy with a good Apgar score.

**Conclusion:** The perceptions and beliefs that pregnant women have after SC surgery need to be balanced with the support of their families and healthcare workforce so that they are successful in undergoing trials of the normal delivery method according to preference. Mentoring activities can be a method of providing education, monitoring efforts, and early detection of complications in pregnant women with former SC operations.

**Keywords:** Family; Support; Healthcare Workforce; Patient; Cesarean Section; Maternal; Neonatal Outcomes

INTRODUCTION

In recent years, there has been a trend toward giving birth by surgery *Caesarean section* (SC) increased in various countries. There is an increase in the choice of birth with SC throughout the world, has become a public health problem in the world. In 2007 it was estimated that 15% of births worldwide occurred by caesarean section. In developing countries, the proportion of births by SC is around 21.1% of the total births, while in developed countries it is only 2%. This is certainly not appropriate based on WHO provisions which in 1985 have set indicators for the incidence of SC is 5-15% per 1000 births for each country without distinguishing developed or developing countries (World Health Organization, 2015).

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In Indonesia, based on basic health research data for 2018, the number of deliveries by the method Caesarean section (SC) in Indonesia is 17.6%. Indications for delivery by Section Caesarea (SC) are caused by several complications with a percentage of 23.2% including fetal position transverse/breech (3.1%), bleeding (2.4%), seizures (0.2%), premature rupture of membranes (5.6%), prolonged labor (4.3%), umbilical cord (2.9%), placenta praevia (0.7%), retained placenta (0.8%), hypertension (2.7%) , and others (4.6%) (Ministry of Health of the Republic of Indonesia, 2019). According to Indonesian Demographic and Health Survey data in 2017, the number of births in Indonesia by the SC method was 17% of the total number of births in health facilities. This shows an increase in the number of deliveries through this method Caesarean section(SC) (Central Bureau of Statistics,2017; Ministry of Health of the Republic of Indonesia, 2018).

Pregnancy with a history of SC have a higher risk of experiencing various complications. The incidence of complications in pregnancies with a history of CS is related to the formation of uterine scar tissue. SC scars will experience changes during the next pregnancy where the scars will thinning the surrounding area followed by widening of the scar due to stretch. This makes the lower segment area in pregnancies with a history of SC thinner. These changes become the basis for how complications such as uterine rupture, placenta praevia, placenta accreta and placental abruption can occur. However, this does not eliminate the possibility of vaginal delivery for mothers with a history of SC. Vaginal delivery in patients who have had SC provides benefits related to lower morbidity rates and shorter length of stay compared to re-election to CS. Pregnancy with a history of CS is a high-risk pregnancy that requires special monitoring and management. Delivery in mothers with a history of CS can be carried out in two ways, namely abdominally, namely elective SC or attempted vaginal delivery on former SC (TOLAC) (Dombrowski, Illuzzi, Reddy, Lipkind, Lee, Lin, & Xu, 2020).

Trial delivery after cesarean section or Trial Of Labour After Caesarean (TOLAC) is a planned birth attempt by a woman who has previously had a cesarean delivery and wants another vaginal delivery while Vaginal Birth After Caesarean (VBAC) is the result of a "successful" trial of labor that results in a vaginal birth. TOLAC can result in a "successful" VBAC or an "unsuccessful" attempt of delivery resulting in repeated cesarean deliveries (Kuppermann, Kaimal, Blat, Gonzalez, Thiet, Birmingham, Altshuler, Bryant, Bacchetti, & Grobman, 2020; Supriatna, 2021).

The choice of CS delivery technique should be made to reduce the mortality and morbidity of the fetus and pregnant women with complications or high risk of having vaginal delivery. However, as with other surgical techniques, the SC procedure has consequences for the emergence of complications, both in the short term and in the long term, which can affect the health of the mother, baby and subsequent pregnancies. In 2005, WHO conducted a prospective cohort study of maternal and perinatal health, in 410 health facilities from 24 districts in eight randomly selected Latin American countries. The results show that mothers who undergo CS deliveries are proven to significantly increase maternal morbidity compared to normal deliveries (World Health Organization, 2015).

Midwives are a key profession in providing services to women throughout the life cycle. And the results of a review of most of the studies show that midwives have great authority over women's health welfare. So the professionalism of midwives is an important element in empowering women. Continuity of care in midwifery is a series of continuous and comprehensive service activities starting from pregnancy, childbirth, postpartum, newborn services and family planning services that relate to the health needs of women in particular and the personal circumstances of each individual. The continuity service relationship is a therapeutic relationship between women and health workers, especially midwives in allocating services and knowledge in a comprehensive manner (Cbe, 2017; Ningsih, 2017).

This case report was prepared based on the results of the mentoring activities Continuity of care in pregnant women with a previous cesarean who have been accompanied during pregnancy, childbirth, and postpartum. The mother has given birth via SC with the condition of the mother and baby being healthy.
The mentoring activity is a collaborative program between Airlangga University Medical Faculty, The Caring for Healthy Mothers and Children Movement builds a brilliant family-based generation, and the Surabaya City Health Office in the working area of the Dupak Health Center. Assistance is carried out using the method telehealth through the application Whatsapp and visits and still pay attention to health protocols.

RESEARCH METHOD

This type of research uses descriptive qualitative research, with a case study approach to Ny. T, 31 years old with G3 P1011, received assistance from 16-17 weeks of gestation. Assistance was carried out 21 times (12 times online and 9 times offline). Mrs. T is a mother who works in a kindergarten in the Dupak Health Center area. Husbands work abroad, so many pregnancies experienced by their parents. The mother had a history of obstetric delivery by SC in 2016 and had an abortion with curettage in 2018. The distance between the pregnancies and the age of the youngest child was five years. Mother has no history of complications during pregnancy, childbirth and the puerperium before. Mother also does not currently suffer or have a history of hereditary diseases and infectious diseases. The last menstrual period (LMP) in this third pregnancy is January 16, 2022 with an estimated delivery date of December 4, 2022. The results of physical and laboratory examinations during pregnancy were all within normal limits, the nutritional status was good and the mother carried out routine checks according to schedule.

RESEARCH RESULTS

This pregnancy was a desired and planned pregnancy. The mother conducted pregnancy checks at the health center 7 times and the hospital 5 times. During pregnancy, the mother regularly consumes multivitamins, namely folic acid tablets added to blood, calcium and vitamin B complex. Ever experienced complaints of cough, runny nose and heartburn due to wrong eating, the companion advised the mother to go to the health center and advised the mother to increase nutritious food, drink lots of water, avoid eating carelessly and get enough rest and complaints can be resolved.

Facilitators routinely establish communication and provide information and education needed by mothers. At the age of 20 weeks of gestation, the planning method of delivery is discussed with the companion and the mother wants to try vaginal delivery. The mother said that when the first child was born, the mother's recovery process was a bit for a long time because of open wounds and companions suggest discussing it with your husband or family. You haven't discussed it with your husband because you want to convey it directly when your husband comes from abroad and after discussing it with your family, you get support on the grounds that you are afraid of harm to the health of the mother and baby. Companions provide education related to VBAC, support, positive affirmation, and empower mothers during pregnancy if the mother wants to do VBAC such as routinely doing pregnancy exercises or yoga, breathing exercises, live a healthy diet and are confident and confident in their abilities.

Mothers are referred for early planning to the hospital at 26/27 weeks of gestation, while at the puskesmas the mother also conveys the mother's wish to try vaginal delivery to the midwife and is advised to discuss with the midwife and obstetrician specialist at the referral hospital. In the 3rd trimester the mother's pregnancy was smooth, experienced no significant complaints, vital signs within normal limits, fetal growth and development according to gestational age. The total weight gain during pregnancy is 10 kg. The mother discussed with the midwife and ob-gyn doctor at the referral site with her husband regarding vaginal delivery trials, but the doctor said that the mother's condition did not allow for vaginal delivery trials and that an elective caesarean section should be carried out to avoid complications such as bleeding and tearing of the uterus besides that if the delivery attempt fails the mother SC will do. The companion continues to give affirmations to the mother so that she is calm and provides an alternative to finding a hospital or doctor who supports VBAC, but the mother is constrained by her husband's permission and the social security agency on health administration process.

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On August 7, 2022 the mother made a routine visit at 36/37 weeks of gestation with an estimated fetal weight based on ultrasound results of 2590 grams. Based on the results of the examination, the doctor decided to plan an elective caesarean section operation at 38/39 weeks of gestation or on August 25, 2022. The mother expressed her concern to the companion regarding the planned section caesarea operation to be undertaken because the mother had confidence that she could give birth spontaneously. In this pregnancy, the mother feels that she has made various efforts and preparations to try spontaneous delivery. The companion advises the mother to remain calm, think positively, and encourages the mother to surrender and provides positive motivation and affirmation to the mother so that the mother does not experience anxiety in preparation for and facing the upcoming birth.

On August 14, 2022, the mother experienced loud bursts so she came to the hospital at 21.00 and the opening was still 1 cm. The mother gave birth via SC on August 15, 2022 at 05.35 WIB. The baby was born at 37/38 weeks of gestation with male sex, birth weight 2650 grams and body length 47 cm, the baby was born immediately crying loudly. Delivery assistance was carried out by an ob-gyn doctor, the delivery went smoothly, the mother's anxiety about SC surgery could be overcome. Then the mother underwent treatment for 3 days and was allowed go home after the condition of mother and baby is healthy. The cost of SC surgery is borne by the social security agency on health. The companion provides positive motivation and affirmation to the mother during postoperative recovery. The companion advises the mother to mobilize properly and carry out light activities after a few hours postoperatively. If there are no complaints, the more often she moves, the post-caesarean section recovery process will also be faster. In addition, the companion also advises the mother to eat and drink without incontinence except for allergies to replace the energy lost during surgery and recommends that a few hours after surgery be given soft food first which is easier to digest during the postoperative treatment or recovery period. Companions also provide education about pain or pain in the stomach generally will decrease within 18 hours after surgery because the action of the anesthetic that was previously given to relieve pain begins to disappear gradually, the mother can adapt according to the instructions companion and feel calm when facing postoperative recovery.

The puerperium and lactation period went smoothly, the mother did not experience significant difficulties because the mother already had experience with previous children. Companions provide information related to nutrition, lactation, postpartum danger signs, and motivate mothers to provide exclusive breastfeeding for babies. Mothers and companions also hold discussions regarding plans to use family planning methods that are appropriate to the mother's condition. The companion provides information regarding various methods of contraception. The mother made the decision not to use any family planning method after discussing it with her husband on the grounds that she was far away from her husband because her husband worked abroad and would not be sure to return within a year.

Baby Mrs. T has been exclusively breastfed for 6 months, basic immunization has been given completely according to schedule. With growth monitoring within normal limits. During the mentoring process, the assistant always reminds the mother to avoid allergens, pollutants, and excessive physical activity that can trigger fatigue. Husbands and family members help mothers a lot in the process of babysitting and daily household activities.

**DISCUSSION**

Mrs. T was given assistance continuity of care since pregnancy, childbirth, postpartum until the child is 6 months old. Continuity of care is a series of care or health services that are different for each individual according to needs and preferences that are mutually sustainable and related from time to time (World Health Organization, 2018). Assistance is carried out through home visits, assistance to health centers as well telehealth. Media used in mentoring telehealth is application whatsapp such as messages or calls. Provision of communication, information and educational (IEC) materials as well as implementation of counseling related to delivery plans is carried out by holding discussions, providing digital educational

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materials in the form of articles and videos, and the MCH Handbook. Process assistance in general went well because the communication process ran smoothly and the mother was cooperative.

The philosophy behind continuing midwifery care or continuity of care include: emphasizing a woman's natural ability to give birth with minimal intervention; monitoring necessary to ensure safe pregnancy and birth, and achieve the physical, psychological, spiritual and social well-being of women and families. Continuing care during pregnancy, birth and the postnatal period; providing individualized education and counseling to women; can be cared for by a known and trusted midwife during delivery and immediately after delivery; and Midwives identify women who need specialist obstetrics and gynecology treatment and then make referrals (Schuers, Chapron, Guihard, Bouchez, & Darmont, 2019).

Vaginal delivery after section caesarea or caesarean section is often also referred to as VBAC or vaginal birth after caesarean delivery. The decision to VBAC needs to be taken considering several clinical conditions. This clinical requirement is not intended to limit pregnant women who have had a caesarean section to choose vaginal delivery, but to reduce the risk of VBAC complications. Criteria for patients who are candidates for VBAC and are recommended to undergo trial of delivery after cesarean section (TOLAC) are single or twin pregnant patients with a history of cesarean section 1 time with a low cross-section, never had surgery on the uterine wall, never experienced uterine tears before, never had medical conditions that complicate normal delivery, such as abnormal placental location or presence of myoma and presence of indications of a narrow pelvis (CPD). Even patients with a history of 2 caesarean sections with low cross-sections can still be candidates for VBAC, taking into account the risk factors that can increase the likelihood of failure. According to the American College of Obstetricians and Gynecologists (ACOG) guidelines, it is recommended that TOLAC be performed in a health facility that can perform emergency caesarean sections. This statement increased the fear of health workers to perform TOLAC, thereby reducing the VBAC rate. So it is recommended that TOLAC be performed in health facilities that have access to emergency caesarean sections, health workers and patients discuss the availability of obstetrics, pediatrics, anesthesia and operating room staff. If a patient who meets the criteria accepts these conditions and the patient still wants to do TOLAC, health workers need to respect the patient's autonomy and decision (American College of Obstetricians and Gynecologists, 2019; Tsai & Wu, 2017).

Pregnant women who successfully undergo VBAC have several advantages over pregnant women who undergo repeated elective caesarean sections, for example a reduced risk of bleeding, decreased risk of thromboembolism, and a shorter duration of stay. The risk of perinatal death in infants born with VBAC is also comparable to the risk of perinatal death in infants born to nulliparous mothers (Rezai, Labine, Gottimukkala, Karp, Sainvil, Isidore, & Henderson, 2016).

The success rate of planned VBACs can be as high as 72-75%. However, 1 in 200 (0.5%) planned VBAC still carries a risk of uterine rupture. A successful VBAC procedure can reduce the risk of complications of repeated elective caesarean sections, such as infection, bleeding, and fetal death. However, a failed VBAC actually increases the risk of complications when compared with repeated caesarean sections (American College of Obstetricians and Gynecologists, 2019). According to ACOG, SCOG, Queensland Clinical Guidelines and Royal College of Obstetricians and Gynecologists (RCOG) that health workers (midwives and doctors) must provide evidence-based information about the risks and benefits and how to apply TOLAC and VBAC to assist their decisions. Make and also comply with the guidelines issued by ACOG that mothers are offered if there are no contraindications (American College of Obstetricians and Gynecologists, 2019). Counseling for women with a history of CS (especially low-segment SC) regarding VBAC (success rate, risk factors, contraindications, advantages and disadvantages), the availability of facilities that are able to accommodate the course of VBAC, even being able to carry out emergency SC actions effectively and efficiently (Cunningham, Leveno, Bloom, Spong, Dashe, Hoffman, & Sheffield, 2014). In cases where healthcare workforce do not
explain the clinical requirements of VBAC and offer trial vaginal delivery and alternative solutions if the mother is still confident to try VBAC, it causes anxiety for the mother regarding the decision to choose which delivery method to face.

The policy also influences the perception of health workers, especially midwives, on the services provided, because of the rules that apply in Indonesia, especially East Java, namely in the risk approach related to the delivery process, namely by using the Poedji Rochjati Score Card (PRSC) (Manuaba, 2010). The overall pregnancy score was divided into three groups, namely Low Risk Pregnancy (LRP) with a total score of 2, High Risk Pregnancy (HRP) with a total score of 6 to 10 and Very High Risk Pregnancy (VHRP) with a total score of 12. In PRSC pregnant women who ever caesarean section was given a score of 8 and the delivery had to be carried out at the hospital, so that early referrals were made to planning in accordance with Minister of Health Regulation number 97 of 2014 concerning Pre-pregnancy, Pregnancy, Childbirth, and Postpartum Health Services, Implementation Contraception Services (Rochjati, 2011).

In Mrs. T case, she had received an early referral plan to a hospital where an early referral plan was made for mothers who were still healthy who thought there might be complications during pregnancy, childbirth and the puerperium. The purpose of referrals is to reduce the number or reduce late referrals, prevent complications of maternal and child diseases, and accelerate the reduction of maternal and child mortality, so that delays in problem identification, decision making, delivery to referral centers, and treatment at referral centers can be properly resolved.

Methods of delivery in pregnant women with SC scars are considered based on obstetric factors of the mother and fetus. In the case of Mrs. T, the mother wants to try giving birth via the vaginal method, but the doctor decides to plan an elective cesarean section without offering a procedure from TOLAC (requirements, procedures, benefits, risks and even success rates) to mothers. Based on the criteria and procedures for performing TOLAC, mothers who meet the criteria can have a trial vaginal birth with close monitoring from health workers, besides that the maternal referral hospital has facilities that have cito operations so that if a TOLAC failure occurs it can be resolved immediately. The mother's belief factor is also a determining factor in choosing a delivery method, but the support of her husband and those closest to her is also a factor that influences the mother in deciding on the choice of delivery method. This is continuous so that the mother is physically and mentally ready to face childbirth with this method.

A study cross sectional in 342 pregnant women in Iran stated that the success of women giving birth according to their preferences is influenced by the factors of perception and belief they have. This becomes the main construct that influences behavior and understanding of the health information received. Another factor is the desire to be accepted through the self-image that you want to display through the chosen delivery method. The study also shows that the opinion of professional health workers is the last thing that is considered by women in choosing a delivery method (Zamani-Alavijeh et al., 2017).

Another factor that influences the decision to choose a delivery method is family support. Research conducted at Mother and Child Hospital Mitra Husada Sidoarjo states that the role of family support has a significant effect of up to 70% in determining the mode of delivery (Marchorina & Mahmudah, 2015). Midwives should also involve families in discussion activities and provide education about birth planning. Support within the family is closely related to the cultural complexities in each family environment, including knowledge, beliefs, morals, laws, customs, and family capabilities. This is continuous between the mother's perception, family support and support from healthcare workforce in choosing the delivery method and the success of the mother giving birth according to her preference.

Conditions leading up to delivery are the most stressful and tiring moments for a mother. At this time it is very necessary to have a husband beside the mother in going through each stage of delivery, because it will really help the mother psychologically. Given that psychology is also an important thing that will affect the success of childbirth (Marchorina & Mahmudah, 2015). Mothers can accept and surrender to the SC operation that will be carried out, mothers face delivery calmly and not worry.

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The government has established a Delivery Planning and Complication Prevention Program (P4K) which is an activity facilitated by midwives in order to increase the active role of husbands, families and communities in planning safe deliveries and preparing for complications for pregnant women, including planning for the use of postpartum family planning with using stickers as target notification media in order to increase the coverage and quality of health services for mothers and new-borns (Rosmiati, Anonim, & Supriyo, 2016). The midwife’s role through mentoring activities is to encourage the active role of the family and ensure that the family understands the mother’s condition, and is committed to providing support according to the mother's needs.

The role of the chaperone accompanying the mother during pregnancy, childbirth, postpartum and the baby has a positive impact both physically and psychologically providing health education, support, support, positive affirmation and providing alternative solutions to any complaints or problems that occur to the mother. Assistance is important in the process of determining the right delivery method according to the preferences and circumstances of the mother. Midwives must understand the bio sociocultural conditions of the mother to facilitate the desired delivery method. The process of discussion and education should involve the family as the mother's main support. Birth planning is important to achieve the welfare of the mother and fetus, and avoid unnecessary medical interventions.

CONCLUSION

Perceptions and beliefs held by pregnant women, family support, and support from health workers are the main factors in the success of determining and undergoing the method of delivery according to preference. Providing continuous care focuses on the needs of women, and encourages family involvement in the process of pregnancy, childbirth, postpartum and newborn care. Mentoring activities can be a method of providing education, monitoring efforts, and early detection of complications in pregnancy. Optimal assistance is able to prepare mothers in facing pregnancy, childbirth and even the postpartum period as well as visits to health facilities.

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