

Pomeroy Sterilization in a Teen with Recurrent Pregnancy and Multiple Cesarean Deliveries: A Case Report

Windi Nurdianawati , Aisyah Shofiatus Nisa , Hadi Susiarno, Dini Hidayat, Dini Pusianawati, Zulvayanti, Ayu Angelina Ronosulistyo, Putri Nadhira Adinda Adriansyah 

Department of Obstetric and Gynecology, Faculty of Medicine, Universitas Padjadjaran, Dr. Hasan Sadikin General Hospital, Bandung, Indonesia

Correspondence: Aisyah Shofiatus Nisa, Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Padjadjaran, Jl. Pasteur No. 38, Bandung, West Java, 40161, Indonesia, Tel +62 821-1572-6914, Email aisyah23009@mail.unpad.ac.id

Introduction: Recurrent teenage pregnancy refers to an adolescent experiencing more than one pregnancy before reaching full adulthood. Pomeroy sterilization in teenagers with a history of two cesarean sections presents a complex issue requiring careful consideration of medical, ethical, and social factors. This case highlights the appropriate management of adolescents in such situations.

Case Illustration: An 18-year-old woman, G3P2A0, at full-term pregnancy, presented for elective cesarean section. The patient had no complaints and exhibited no signs of labor at the time of admission. Laboratory findings revealed anemia, with a hemoglobin level of 7.2 g/dL. She received two units of packed red cell (PRC) transfusions preoperatively. A cesarean section was performed, delivering a healthy baby boy weighing 2720 grams and measuring 47 cm. After a thorough discussion and informed consent regarding contraceptive options, the patient and her husband opted for Pomeroy sterilization, as they felt their family was complete.

Conclusion: Managing teenage pregnancy requires a holistic and cautious approach, especially in cases involving previous cesarean sections. Comprehensive care, including monitoring for complications such as anemia and fetal growth restriction, is essential for ensuring maternal and neonatal health. Furthermore, informed decision-making regarding contraception is vital to prevent recurrent pregnancies and support the psychosocial well-being of adolescent mothers. This approach helps achieve better outcomes for both mother and child.

Keywords: anemia, fetal growth restriction, Pomeroy sterilization, recurrent teenage pregnancy

Introduction

The World Health Organization (WHO) defines adolescence as the transitional period between childhood and adulthood, specifically encompassing individuals aged 10 to 19 years. Within this age range, any occurrence of pregnancy is categorized as teenage pregnancy.¹ Adolescence is a transitional period from childhood to adulthood, and pregnancy within this group is often associated with various physical, psychological, social, and economic risks for both the mother and the baby.²⁻⁵ Recurrent teenage pregnancy is defined as an adolescent becoming pregnant more than once before reaching full adulthood.⁶

The incidence of teenage pregnancy varies significantly across different countries. The highest rates are found in Africa, with an average of 143 births per 1,000 women aged 15–19. In comparison, Asia ranks fourth out of five continents, with an average of 68 births per 1,000 women in the same age range.⁷ Indonesia currently records the highest number of births among adolescent girls aged 15–19 years in Southeast Asia.⁸ In Indonesia, teenage pregnancy remains a significant public health concern, particularly among females aged 15–19 years. The age-specific fertility rate in this group is 36 births per 1,000 women. Notably, 13.1% have experienced their first pregnancy, and 36.7% have already given birth.⁹ The lowest teenage birth rates are found in Scandinavian countries, Switzerland, the Netherlands, Japan,

Korea, and China. Although abortion is permitted in these countries, both pregnancy and abortion rates remain low due to the accessibility and education regarding contraception for adolescents.⁷

Teenage pregnancy is considered a public health issue in many countries, as adolescents are generally more vulnerable to health complications. These include higher risks during pregnancy and childbirth, preterm birth, low birth weight (LBW), and elevated maternal mortality rates.^{2–5} Pregnant teenagers face higher risks during delivery compared to young adult women. One reason is that adolescents are still in their growth phase. After the first menstruation (menarche), teenagers typically grow an additional 7 cm on average until their growth ceases. During pregnancy, there is competition for nutritional resources between the mother's own growth and the developing fetus, known as nutrient partitioning, which can disrupt the growth and development of both the adolescent and the fetus.¹⁰

Anemia in pregnant teenagers is a common complication because adolescents are in a rapid growth phase and require increased iron intake to support the body's biological changes and meet the needs of the fetus. Iron deficiency in pregnant adolescents can lead to serious complications for both the mother and the fetus, such as severe anemia, fatigue, and an increased risk of infection for the mother. For the fetus, maternal anemia increases the risk of low birth weight, preterm birth, intrauterine growth restriction, and low APGAR scores, all of which can affect both short- and long-term infant health.¹¹

Although teenage pregnancy is not uncommon in some regions, this case is unique and clinically significant for several reasons. First, the patient was an 18 year old G3P2 adolescent who had already undergone two cesarean deliveries, both occurring at ages 15 and 17, with short interpregnancy intervals. Second, she presented with severe anemia (Hb 7.2 g/dL) and a pre pregnancy body mass index of 14.4 kg/m², indicating undernutrition, factors that pose serious risks for both mother and fetus. Third, this case highlights the intersection of adolescent reproductive health, inadequate antenatal care, and sociocultural influences, including early marriage during the COVID 19 pandemic, limited contraceptive knowledge, and reliance on family decision making.

Moreover, the patient's decision to undergo permanent contraception via Pomeroy sterilization at the age of 18, supported by her mother and consented to by her then husband, underscores the importance of reproductive autonomy and culturally sensitive family planning counseling. This is particularly relevant in the Indonesian context, where permanent contraception must meet criteria of voluntariness, understanding, and medical eligibility.¹² Pomeroy sterilization in teenagers who have undergone two cesarean sections is a complex topic that requires medical, ethical, and social considerations. This case will highlight the importance of contraception in preventing recurrent teenage pregnancies and appropriate management for adolescents with a history of two cesarean sections and anemia as a complication.

Case Illustration

An 18-year-old woman, G3P2A0, at 9 months of pregnancy, presented for termination of pregnancy via cesarean section. The patient reported no current complaints, and there were no signs of labor. Fetal movements were active. The patient denied any history of chronic illnesses such as hypertension, diabetes, heart disease, or asthma. She had married at the age of 15 following an unplanned pregnancy. Her spouse, also 18 years old, worked as a vendor. The patient underwent her first cesarean section at age 15 due to cephalopelvic disproportion, delivering a 2500-gram baby, and her second cesarean section at age 17, delivering a 2000-gram baby. This was her third pregnancy.

The indication for cesarean section in this second pregnancy is a history of previous cesarean delivery, with an interpregnancy interval of less than 48 months, and a clinical assessment indicating an inadequately spacious pelvis, as reported by the patient. These factors were considered by the previous healthcare provider in recommending a repeat cesarean section.

Physical examination revealed normal vital signs, and the patient's pre-pregnancy body mass index (BMI) was 14.4 kg/m², categorized as underweight. External examination showed a fundal height of 30 cm, fetal heart rate between 148–152 beats per minute, and no uterine contractions.

Figure 1 shown the result of ultrasonography evaluation. The obstetric ultrasound reveals a single live intrauterine fetus with biometric measurements consistent with the late third trimester of pregnancy. The biparietal diameter (8.77 cm), head circumference (31.56 cm), and femur length (6.84 cm) all correspond to approximately 35 weeks of gestation. The estimated fetal weight is 2609 grams.

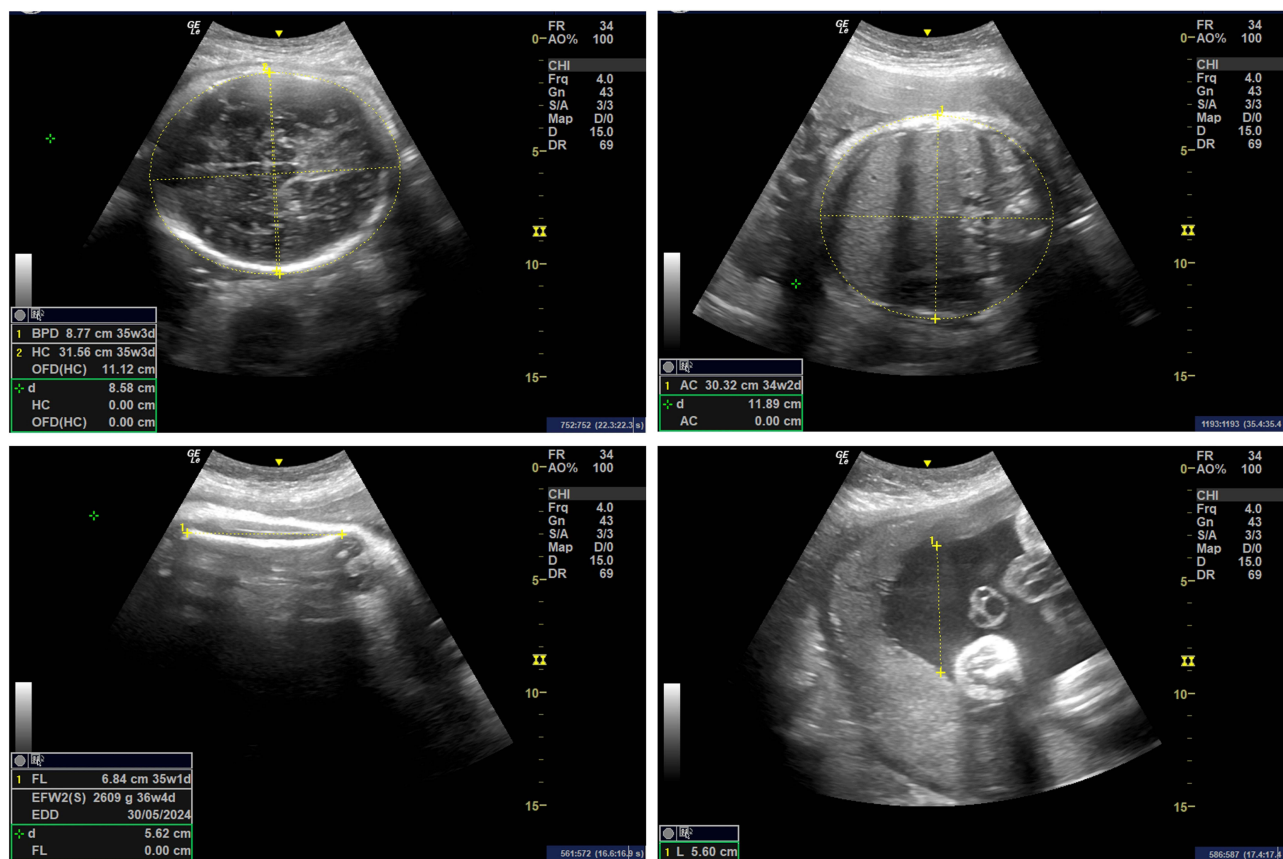


Figure 1 Ultrasonography Result with No Abnormalities are Evident on This Ultrasound.

Laboratory results indicated hemoglobin of 7.2 g/dL, hematocrit 24.9%, MCV 73.5, MCH 21.2, and MCHC 28.9. Ferritin levels were 9.1 ng/mL, and hemoglobin electrophoresis showed an HbA2 of 2.2%, suggesting a reduced HbA2 fraction potentially due to iron deficiency, although alpha thalassemia could not be ruled out.

The patient received two units of packed red cell (PRC) transfusion prior to the cesarean section, which increased her hemoglobin level to 8.9 g/dL. The cesarean section and Pomeroy sterilization procedures were successfully performed two days after admission. The patient delivered a male infant weighing 2720 grams and measuring 47 cm in length, with APGAR scores of 7 and 9 at the first and fifth minutes, respectively.

Postpartum monitoring revealed no signs of infection, and the patient was discharged two days later with a prescription for mefenamic acid. During a follow-up home visit, the patient disclosed that her marriage had ended when her youngest child was one month old. She is the fourth of five siblings. Her eldest sibling, who is married with one daughter, lives with her in the same household. The second sibling is also married and has one child, while the third and youngest siblings remain unmarried.

The patient resides in a rented two-story house measuring 5×5 meters, with one bathroom and a kitchen on the first floor, and one bedroom and a drying area on the second floor. The rent is 750,000 IDR per month. Her parents, who work as street vendors selling tissues, fully support her and her two children financially.

Her first pregnancy occurred at the age of 15 during the COVID-19 pandemic when schooling was conducted online. During this period, she frequently met her then-boyfriend in secret. Upon discovering her pregnancy, her parents arranged a religious marriage to avoid social stigma. Despite being pregnant, she completed junior high school without her friends or teachers becoming aware of her condition. This was her third pregnancy, which occurred less than six months after her second.

When asked about her decision to undergo Pomeroy sterilization, the patient expressed no regret. She explained that her mother had recommended the procedure, viewing it as a wise choice given her circumstances. Her mother confirmed

this, citing concerns about her daughter's high fertility and the significant risks associated with future pregnancies. The patient admitted that she had not used contraception during her first and second pregnancies due to a lack of understanding and her husband's opposition, as he believed that IUDs were religiously forbidden. Additionally, she avoided hormonal contraceptives such as pills or injections, perceiving them as expensive. She refrained from visiting the local health center because she had no one to accompany her.

The patient received comprehensive contraceptive counseling, during which various methods, including long acting reversible contraception (LARC), were offered and clearly explained. However, the patient firmly chose permanent sterilization (Pomeroy procedure) after considering her personal and socioeconomic circumstances. She expressed concern about her financial ability to support additional children and was particularly worried about the potential health risks of future pregnancies, given her history of three previous cesarean sections. The decision was made voluntarily and in full understanding of the permanent nature of the procedure, following a detailed discussion involving both the patient and her husband.

Informed consent for the sterilization procedure was obtained in accordance with institutional and ethical guidelines. Both the patient and her husband participated in the counseling process, during which they were fully informed about the nature of the procedure, its permanent implications, potential risks, benefits, and available alternatives. Following this, both parties voluntarily signed the official consent form. The patient was of legal age and demonstrated full understanding of the information provided. The procedure was carried out under the oversight of the attending medical team in compliance with applicable clinical and ethical standards.

One month after childbirth, her husband remarried and left her, taking their youngest child with him. The first child is male and the second is female. According to the patient, the ex-husband took the youngest simply because he was still a baby and could be raised from infancy, while the older child, although not yet independent, was considered too old for such care with his new wife. Despite this, the patient expressed contentment with her decision for permanent contraception and her current marital status. Although she occasionally wonders about the possibility of future pregnancies, she does not regret her choice. Her current partner, whom she met after her separation, has accepted her status, and she remains supported by her parents in raising her two children. Special attention was given to ensure that her decision for permanent contraception was made freely and without coercion, in the context of her age, social vulnerability, and prior obstetric history.

The patient comes from a lower socioeconomic background, with limited financial resources and educational attainment, which influenced her reproductive health decisions. Despite these challenges, she was able to access antenatal care at a public healthcare facility, although the frequency of visits was irregular due to transportation and economic barriers. Psychological support was provided throughout the antenatal and preoperative period, with counseling sessions addressing not only medical concerns but also emotional readiness for sterilization and parenting.

Discussion

Adolescence is a critical period marked by vulnerability but also an opportunity for addressing both physical and mental health, closing growth gaps, and ensuring better future outcomes. Key factors such as lifestyle, dietary habits, psychosocial influences, and socioeconomic determinants play a significant role in the nutritional status and overall health of adolescents.¹³ In 2016, adolescents were highlighted in the Global Strategy report as essential for achieving the Sustainable Development Goals (SDGs), underscoring their importance in attaining global targets and the success of the 2030 Agenda.¹⁴

Adolescent childbearing is a prevalent issue in the worldwide, especially developing countries including Indonesia, affecting individuals across diverse geographic, racial, ethnic, and socioeconomic backgrounds.¹⁵ Healthcare providers often face challenges in delivering comprehensive care to these young families, many of whom encounter numerous obstacles to achieving optimal health and development. Teen mothers frequently experience significant environmental and psychosocial stress, as well as a heightened risk of mental health issues that can impact both themselves and their children. Therefore, primary care for these young mothers and their children must address these challenges. In recent years, there has been an increasing emphasis on the role of pediatric primary care providers in identifying and managing

mental health concerns within the primary care setting, leading to the development and dissemination of integrated care models.^{16,17}

Teenage pregnancy remains a social issue in many countries, with births among adolescents (ages 13–19) accounting for 10% of all births.¹⁸ Adolescents face higher obstetric complication rates, notably low birth weight and preterm deliveries, possibly due to immature reproductive systems.¹⁹ Additionally, recurrent teenage pregnancies increase the risk of fetal growth restriction due to nutrient partitioning, where the mother's nutritional needs during growth compete with those of the fetus. This competition can disrupt fetal growth, leading to low birth weight and intrauterine growth restriction.

A meta-analysis assessing the link between adolescent pregnancy and the risk of low child weight found that children born to mothers under 24 years had a higher likelihood of being underweight compared to those born to adult mothers.²⁰ However, findings are not universally consistent. For instance, a study in Manchester and London that compared pregnancy outcomes in 500 adolescent mothers (ages 14–18) and 80 adult mothers (ages 25–40) concluded that maternal growth did not negatively affect fetal development. Greater maternal weight gain and high IGF-1 levels suggested that the developing adolescent body might be capable of providing adequate energy and nutrients to support both fetal and maternal growth.²¹

Socioeconomic and cultural factors also impact adolescent pregnancy outcomes, beyond biological aspects. A study from Vietnam found no association between adolescent pregnancy and low child weight, possibly due to strong family support systems that mitigated negative effects on child health.²²

Anemia is a significant risk associated with recurrent teenage pregnancies, primarily due to the increased iron requirements during pregnancy. Pregnant adolescents are particularly susceptible to iron deficiency anemia (IDA), as their rapid growth and significant biological changes exacerbate their nutritional needs. IDA has reached concerning levels among pregnant adolescents, especially in developing nations. A study in Turkey involving 122 pregnant teenagers under 19 years old found that nearly one-third had IDA, with a prevalence of 39.5%.²³ Effective management, including iron supplementation and careful monitoring, is essential to reduce these risks and support the health of both mother and baby.

In this case, a recurrent teenage pregnancy with anemia complications was observed. Supporting investigations suggested iron deficiency anemia, prompting the management plan to include a transfusion of two units of packed red blood cells. Beyond anemia, the patient also had a history of two prior cesarean sections in previous pregnancies.

Between 2007 and 2017, there was a 10% increase in cesarean section deliveries among Indonesian women. Women living in urban areas were more likely to undergo cesarean delivery than those in rural areas, with an adjusted odds ratio (aOR) of 1.49.²⁴ Studies by Zahroh et al further emphasize that a history of previous cesarean section, combined with healthcare providers' preference for recommending repeat cesarean delivery over attempting vaginal birth after cesarean (VBAC), is a key factor influencing the high rate of repeat cesarean deliveries.²⁵

Multiple cesarean deliveries at a young age increase the long-term maternal risks, including adhesions, uterine rupture, and abnormal placental attachment such as placenta accreta spectrum disorders.²⁶ The World Health Organization (WHO) and the International Federation of Gynecology and Obstetrics (FIGO) recommend that cesarean sections should be performed only when medically necessary, especially in adolescents, due to increased surgical risks and the potential impact on future reproductive health.²⁷ These concerns are particularly critical in regions with limited access to contraception and comprehensive adolescent reproductive health services. High cesarean rates among adolescents highlight broader public health challenges in preventing early and repeated pregnancies, improving access to family planning, and ensuring quality maternal care.

In a systematic review article, several factors were identified as being related to repeated pregnancies, including intention and motivation, lack of control over one's life, inability to make decisions regarding contraception, and barriers to accessing family planning and contraception.⁶ Intention and motivation regarding repeated pregnancies are key factors in adolescent pregnancy. In a study conducted by Conroy et al, there were two perceptions among teenage mothers after giving birth: some felt more confident and empowered to go through another pregnancy, while others showed ambivalence about avoiding a second pregnancy. Having the motivation and intention to prevent pregnancy can be an effective strategy to prevent repeat teenage pregnancies.²⁸

Adolescents often lack control over their lives and are unable to make decisions independently. Another influencing factor for repeated pregnancies is the inability to make decisions regarding contraception. Teenage mothers with repeated pregnancies tend to need a collaborative approach when making decisions about contraception use. Inadequate knowledge and misconceptions about contraception are major risk factors for repeat pregnancies.^{6,29}

In both the first and second pregnancies, patients mentioned that contraception was not used because they did not understand its importance, and their husbands did not permit its use due to religious reasons. The patient did not understand the importance of contraception. In her last pregnancy, the patient was referred to a hospital due to concerns about potential placental adhesions. The patient's mother was concerned that another pregnancy would affect the health of the child. She advised the patient and her husband to opt for a permanent contraception method, specifically the Pomeroy sterilization procedure. The patient's mother also assured her daughter that three children were enough. The patient and her husband decided to undergo the permanent contraception method, the Pomeroy sterilization.

The last factor is the barrier to accessing contraception planning. Logistic barriers, as found by Conroy et al (2016), often hinder access to contraception. These barriers are similar to the perceptions of healthcare providers regarding the health-seeking behavior and decision-making of adolescents in relation to their sexual and reproductive health. Conservative societies, social stigma, lack of information and education, and a lack of adolescent-friendly facilities and services are significant barriers to accessing family planning and contraception for adolescents during their transition period.^{6,28}

Several factors can influence an individual's choice of contraception, including a woman's views on fertility, pregnancy, and contraception, social relationships, and the characteristics of healthcare services. Some women do not use contraception because they believe their risk of pregnancy is low, such as thinking they are too old, breastfeeding, or having infrequent sexual intercourse, or assuming they or their partner are infertile. Inadequate or inaccurate knowledge, as well as concerns about side effects, are major barriers to contraception use worldwide. These barriers include poor understanding of the reproductive cycle, fertility, and "safe" periods.²⁹

Women often have low knowledge about how to access services and how to use contraception correctly. Their decisions are influenced by perceptions of different types of contraception, including ease of use, risk of forgetfulness, perceptions of effectiveness and health benefits, fertility return, discomfort with foreign objects in the body, compatibility with breastfeeding, preparation before sex, as well as concerns about side effects, hormones, health risks, impact on sexual pleasure, menstrual changes, and the need to visit healthcare providers. Some women believe hormonal contraception may be harmful and cause side effects such as menstrual disturbances, fertility concerns, cancer, and weight fluctuations.²⁹

A woman's decision to choose contraception is also influenced by those closest to her. Family attitudes have a significant impact on contraception use. Parents can be a source of information and advice, but teenagers tend to talk to them only if they have a close relationship. Educated parents are more likely to delay marriage and pregnancy for their children. A lack of "strict" family rules is associated with a higher risk of teenage pregnancy. In developing countries, adolescents identify parents, health workers, and teachers as trusted sources of information. However, they often obtain more information from peers and other family members.²⁹

Peers, school, and social networks have a significant influence on contraception use among teenagers globally. Some adolescents are reluctant to use contraception because they are worried about their peers finding out they are sexually active or because they fear using condoms or birth control pills, especially in environments where premarital sex is considered unacceptable. Social norms have a strong influence on contraception use, particularly attitudes toward sex, contraception, and the age of motherhood. Social norms in society strongly affect an individual's decision to use contraception.²⁹

In the UK, using condoms or emergency contraception is viewed positively as a "responsible" action, while in some studies, emergency contraception use and abortion are seen as "irresponsible." In Sub-Saharan Africa, pregnancy is often used as a bargaining tool to strengthen relationships. In regions where polygamy is accepted, women have more children to stabilize marriages, compete with other wives, and prevent their husbands from marrying again.²⁹

Worldwide, religion also plays a role in influencing the use of contraception. Lower educational levels are often associated with repeated teenage pregnancies. Low socioeconomic status, lack of education, and limited access to

employment are common risk factors for teenage pregnancy. More educated adolescents tend to have better knowledge about contraception and are more likely to use modern contraceptive methods. On the other hand, the lack of cost coverage becomes a barrier to contraception use.²⁹

Healthcare providers have a strong influence on access to contraception, as well as the choice and use of contraceptive methods. Some women experience difficulty in obtaining information about intrauterine devices (IUDs), even though they are eligible for this method, but are not recommended to use it. This makes them feel less in control of decision-making regarding contraception methods. This highlights the urgent need to improve healthcare systems by enhancing healthcare providers' skills, providing accurate and easily accessible information, and creating a supportive, non-judgmental environment for women, including teenagers and unmarried individuals.²⁹

The most effective contraceptive options available for adolescents include long-acting reversible contraception (LARC) methods, consisting of implants and intrauterine devices (IUDs), with a pregnancy rate of less than 1 per 100 women during the first year of use. LARC methods are the most effective reversible contraceptives because they do not require regular action from the adolescent. Due to the safety and effectiveness of LARC, The American College of Obstetricians and Gynecologists and The American Academy of Pediatrics (AAP) support the use of IUDs and implants as contraceptive options for adolescents. These organizations, along with the Centers for Disease Control and Prevention (CDC), also recommend that LARC methods be discussed with pregnant adolescents. For adolescents who choose LARC, initiation is recommended immediately after childbirth, miscarriage, or abortion.³⁰

Permanent contraception is a method of pregnancy prevention that is irreversible. This includes procedures such as vasectomy and tubal ligation. The requirements for permanent contraception are voluntary, desired, and based on health considerations. In this case, the patient and her husband voluntarily wanted sterilization contraception after receiving counseling about available contraceptive options. The patient was informed about how permanent contraception is performed. At that time, the patient expressed happiness in her marriage and felt content with the number of children she had. The patient also expressed concern that a future pregnancy could pose health risks.¹²

Various types of long-term contraceptives are available for patients who have undergone two cesarean sections, aside from Pomeroy sterilization, such as IUDs. Opting for a reversible long-term contraceptive like an IUD provides adolescents with the flexibility to plan for future pregnancies, potentially with different partners. Counseling provided by the attending physician during childbirth plays a crucial role in shaping a person's choice of contraceptive method. If an adolescent is offered a long-term contraceptive after their first pregnancy, it can significantly reduce the chances of repeat pregnancies. Government initiatives that require contraception for adolescent pregnancies may lower the rates of repeat adolescent pregnancies; however, such mandates can conflict with women's rights to choose and determine the most appropriate contraceptive method for themselves. The newly signed Government Regulation No. 28 of 2024 on Health by President Joko Widodo includes provisions for reproductive health services aimed at school-aged children and adolescents. Article 103(4) of this regulation mandates that reproductive health services must also encompass the availability of contraceptives.

Along with the decision regarding delivery, the option of performing Pomeroy sterilization simultaneously with the third cesarean section required careful ethical and clinical consideration. The patient, although only 18 years old, had already undergone three cesarean deliveries, which places her at significantly increased risk of uterine rupture in any future pregnancy due to the compromised integrity of the uterine wall. The rate of uterine rupture in women with at least one previous cesarean section was 0.5% (170 out of 37,366 cases), with variation based on country development levels, ranging from 0.2% in countries with a high Human Development Index (HDI) to 1.0% in those with a low HDI.³¹ Uterine rupture is a life-threatening condition that can lead to severe maternal and fetal morbidity or mortality. Given these risks, vaginal birth after cesarean (VBAC) is not recommended, and any future pregnancy would require planned elective cesarean delivery in a well-equipped facility.³²

Prior to the procedure, the patient received thorough counseling regarding the permanent nature of Pomeroy sterilization, including a discussion of available contraceptive alternatives, associated risks, and long-term reproductive implications. The patient voluntarily chose sterilization after demonstrating clear understanding and decisional capacity, without coercion. According to the criteria established by the Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) which emphasize voluntariness, happiness, and health, the patient met all necessary requirements.¹²

Considering her young age, high obstetric risk, and psychosocial background, the decision to proceed with Pomeroy sterilization alongside the cesarean section was deemed ethically and medically appropriate.

Along with the decision regarding delivery, Pomeroy sterilization performed simultaneously with cesarean section also requires careful consideration. It is important to ensure that the patient fully understands the permanent nature of sterilization and that there are no medical contraindications that could affect this decision. The patient needs to fully understand that Pomeroy sterilization is a permanent contraceptive method that cannot be undone. A discussion about various contraceptive methods and their side effects is crucial before a final decision is made.¹² According to the criteria for permanent contraception set by the Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) or *National Population and Family Planning Board* in Indonesia, which include voluntariness, happiness, and health, the patient meets these criteria, so it was decided to proceed with Pomeroy sterilization alongside the cesarean section.

Cesarean delivery has become a common procedure, contributing to nearly a third of all births in the United Kingdom and the United States. While this procedure is relatively safe, cesarean section can still lead to both short-term and long-term complications. The healing process of tissue after surgery involves several stages: hemostasis (stopping bleeding), inflammation, proliferation (tissue regrowth), and remodeling (restructuring of tissue). Different types of tissue, such as skin and muscle, heal in different ways, and excessive or inadequate scarring can cause problems.³³

In teenage pregnancy, psychosocial support is crucial because stress can affect adherence to therapy, including treatment for anemia. Involving family and support from healthcare providers can help pregnant teenagers follow care more diligently.³⁴ All these aspects are interconnected in ensuring the health and well-being of both the mother and the baby.

Several limitations should be acknowledged in the management and reporting of this case. First, the absence of complete antenatal care (ANC) records from the patient's previous pregnancies limited the ability to assess her full obstetric history, including trends in fetal growth, maternal complications, and previous interventions. This lack of documentation restricted a more comprehensive evaluation of her reproductive risk profile.

Second, although informed consent was obtained and contraceptive counseling was provided in accordance with institutional and ethical standards, the decision for permanent sterilization was made at a young age and within a complex sociocultural context. The counseling process involved both the patient and her then-husband, and the patient demonstrated understanding of the procedure. However, the influence of family members, particularly her mother, may have shaped her decision. This raises considerations about the extent of autonomous decision-making and underscores the need for careful, age-appropriate counseling when offering permanent contraception to adolescents.

This case underscores several important clinical takeaways for practitioners managing recurrent teenage pregnancies. First, it highlights the critical need for early identification and correction of anemia in adolescent pregnancies to reduce the risk of maternal and fetal complications, such as fetal growth restriction. Second, in cases of multiple previous cesarean deliveries, especially in young patients, clinicians must carefully evaluate the surgical risks, including adhesions and uterine rupture. Third, permanent contraception, such as Pomeroy sterilization, can be considered in adolescent patients when thoroughly discussed with the patient and their partner, ensuring informed consent and consideration of long-term reproductive goals.

Conclusion

Teenage pregnancy requires a comprehensive and individualized approach that considers the adolescent's medical and obstetric history, particularly in cases with prior cesarean sections. Early reproductive counseling plays a crucial role in equipping young mothers with knowledge about the risks of anemia, fetal growth restriction, and complications from repeated surgical deliveries. Tailored antenatal care and close monitoring are essential to ensure maternal and fetal well-being. Moreover, individualized delivery planning and informed postnatal contraceptive counseling are critical to reducing the risk of recurrent high-risk pregnancies and promoting the long-term psychosocial health of adolescent mothers. The implications for clinical practice and public health should be addressed more directly, particularly by strengthening access to adolescent reproductive health services, improving contraceptive education, and developing targeted policies to reduce preventable maternal and neonatal morbidity in this vulnerable population.

Informed Consent Patient Statement

No formal ethical clearance was required for the publication of this case. The authors confirm that written informed consent for publication of this case report and any accompanying images was obtained from the patient and her spouse. The patient was informed in detail about the case content and agreed to its publication. All personal identifiers have been removed to ensure patient anonymity.

Disclosure

The authors report no conflicts of interest in this work.

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