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Placenta Previa Prevalence and Risk Factors in Women Undergoing Cesarean Sections : Prevalensi dan Faktor Risiko Placenta Previa pada Wanita yang Melakukan Operasi Caesar

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Abstract

General Background Placenta previa is a major obstetric condition associated with antepartum hemorrhage and adverse maternal and neonatal outcomes. **Specific Background** Rising cesarean section rates and increasing maternal age have contributed to higher reported cases, particularly in high-risk hospital settings. **Knowledge Gap** Limited region-specific data are available regarding placenta previa prevalence and maternal risk factors among women undergoing cesarean delivery in Iraq. **Aims** This study aimed to estimate the prevalence of placenta previa and identify associated maternal risk factors among cesarean deliveries in AL-Muthanna and AL-Diwaniya, Iraq. **Results** A retrospective cross-sectional analysis of 300 cesarean deliveries identified placenta previa in 15% of cases, with advanced maternal age, multiple previous cesarean sections, high parity, elevated body mass index, anterior placental location, and comorbidities showing significant associations. **Novelty** This study provides stratified regional evidence linking surgical history and maternal characteristics to placenta previa within a high-cesarean population. **Implications** Early identification of high-risk women may support tailored antenatal surveillance and surgical planning to reduce maternal complications.

Keywords: Placenta Previa, Cesarean Section, Maternal Age, Obstetric Risk Factors, Pregnancy Complications

Key Findings Highlights:

Placenta previa was identified in a notable proportion of cesarean deliveries within the study population.

Advanced maternal age and repeated surgical deliveries showed strong statistical associations.

Stratified analysis clarified maternal and placental characteristics linked to higher clinical risk.

Introduction

The placenta's location in the lower uterine segment, either extremely near to or partially covering the internal os of the cervix, causes placenta previa, an obstetric issue (1). It is estimated that the incidence is between 0.3% and 2% worldwide (2). This condition is thought to increase the chance of obstetric hemorrhage, which can lead to postpartum hemorrhage issues that can be fatal for both the mother and the baby (3). The prevalence of placenta previa has increased over the past few decades, and this trend is associated with an increase in cesarean sections and an aging of the mother (4,5). Since its inspection and diagnosis necessitate the attending physician's expertise and a variety of diagnostic tools available in the hospital unit, its precise quantification is challenging (6).

Negative outcomes for the mother and the fetus are linked to placenta previa. Prematurity and poor Apgar scores result in increased fetal morbidity, necessitating admission to the newborn critical care unit. It is possible for a newborn to die. Severe bleeding, frequent blood transfusions, urogenital injuries, sepsis, extended hospital stays, and stays in the intensive care unit (ICU) are examples of maternal issues (7,8). Placenta previa can cause premature birth, which is linked to higher rates of perinatal morbidity and mortality. Numerous problems, including infant infection, hypoxia at birth, and birth weight below the 10th centile for gestational age, are linked to preterm delivery. Placenta previa affects about 1 in 300 newborns (9, 11). Maternal age is linked to the occurrence of placenta previa, which is around 1 in 1500 for women under 19 and 1 in 100 for those over 35 (12).

Recent cross-sectional studies have shown that prevalence rates among hospital deliveries range from 0.5% to 2%; higher rates were observed in tertiary facilities that manage high-risk pregnancies (13,14). For instance, a 10-year retrospective study carried out in Saudi Arabia discovered a considerable degree placenta previa rate of 0.69%, which was highly associated with advanced mother age, high parity, and repeated cesarean sections (15). In a similar vein, Sugai et al. (7) found that 5.78% of Pakistani women had previously undergone cesarean scars, underscoring the significance of surgical history and regional variety.

Even with improvements in imaging and surgical planning, early detection of high-risk individuals remains crucial. Cross-sectional analyses provide useful data on risk classification and prevalence trends, allowing for resource allocation and focused interventions (16,15). The purpose of this study is to assess maternal risk factors related to lower segment placenta previa in a specific clinical group and to find out how common it is among cesarean deliveries.

Methodology

The maternity Teaching Hospital's obstetrical department in AL-Muthanna and AL-Diwaniya, Iraq, served as the study's site. The study started on June 18, 2024, after fulfilling all requirements and receiving ethical permission (197) from the relevant authorities. The information was gathered prospectively between September 2024 to September 24, 2025. To choose cases, non-probability purposive sampling was used. Instead of choosing participants at random from the general community, we purposefully included those who satisfied particular diagnostic and clinical criteria using this selection technique. At the selected facilities, 300 cesarean deliveries were recorded over this time (50 cases of placenta previa out of all cesarean deliveries).

A qualified radiologist used transabdominal ultrasonography to diagnose placenta previa prior to surgery. With the patient's permission, a transvaginal scan was occasionally performed to locate the placenta in dubious circumstances. At the time of operation, placental localization was immediately observed to confirm the diagnosis. MRI was not performed on any of the patients. In addition to general consent, special consent for hysterectomy was obtained in all patients suspected of having a morbidly adherent placenta. In each of these cases, at least four blood units were cross-matched, and a top doctor conducted the procedure. These instances were handled using a multidisciplinary approach.

The incidence of risk factors was assessed and the baseline features of those with persistent placenta previa at delivery were examined. The study evaluated a number of factors and demographics, including age, history of uterine surgery, including D&C, one or more prior Caesarean sections, hysterotomy or myomectomy, and the existence of comorbidities. Preeclampsia, anemia, persistent hypertension, twins, and pregestational and gestational diabetes mellitus were among these comorbidities.

This study included fifty placenta previa patients. Information was gathered. Maternal age, parity, prior uterine surgeries and miscarriages, intraoperative and postoperative problems, expected blood loss, number of blood transfusions, and hospital stay were all included. Pediatricians evaluated every newborn right away. SPSS 17 was used to enter and analyze maternal and neonatal data. The mean and standard deviation were used to display quantitative data.

Result

Variables	Category	F
Age of the mother	19-27 years	108(36.0%)