Obs and Gynae PG Focus Series

Caesarean Birth

Past, Present and Optimizing the Future

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Maternal Morbidity and Mortality

INTRODUCTION

In 1885, the operative mortality rate for caesarean births was 85% in Great Britain and Ireland, and it rose to 92% in New York by 1887. By the early 20th century, this rate had decreased to <10%, even though the classical operation was predominantly performed during that time. In high-resource settings today, maternal mortality is rare; however, the risk of death following a caesarean section remains three times higher than that of vaginal birth. Data from the Confidential Enquiry into Maternal Deaths in the Netherlands from 1999 to 2013 indicated a mortality risk of 21.9 per 100,000 caesarean sections compared to 3.8 deaths per 100,000 vaginal births. In contrast, low- and middle-income countries report a maternal mortality rate of 7.6 per 1,000, with the highest rates occurring in sub-Saharan Africa (10.9 per 1,000). Notably, a quarter of all maternal deaths in these regions involved women who had undergone a caesarean section. The maternal mortality rate associated with caesarean deliveries is approximately 2.2 per 100,000, significantly higher than the rate for vaginal deliveries, which is about 0.2 per 100,000.[1,2]

In 1885, the operative mortality rate for caesarean births was 85% in Great Britain and Ireland, rising to 92% in New York by 1887. By the early 20th century, this rate had dropped to below 10%, despite the continued prevalence of the classical operation during that era. Today, maternal mortality is rare in high-resource settings, yet the risk of death following a caesarean section is still three times higher than that associated with vaginal delivery. Women who had caesarean deliveries also faced increased risks of postpartum cardiac arrest, wound hematoma, major puerperal infections, anesthetic complications, venous thromboembolism (VTE), and hemorrhage requiring hysterectomy compared to those who delivered vaginally.[3]

In addition to immediate morbidity and mortality, caesarean births are linked to significant long-term health issues. They elevate the risk of future infertility, placental abnormalities, uterine rupture, and stillbirth. The likelihood of conditions such as placenta previa, placenta accreta, and placental abruption also rises in subsequent pregnancies. Specifically, the risk of placenta accreta increases from 3% after the first caesarean to 11% after the second, 40% after the third, and 60% after the fourth caesarean section. Additionally, women with a history of caesarean delivery face a higher risk of complications if they require a hysterectomy later in life.

FETAL RISKS

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Concerns about newborn safety have contributed to the rising rates of caesarean sections. While elective caesarean deliveries may reduce the risk of intrapartum asphyxia, they are associated with a higher incidence of respiratory complications at birth, even among term infants. The risk of fetal lacerations during caesarean delivery is about 2%. Additionally, iatrogenic prematurity remains a significant issue, as clinicians sometimes fail to adjust gestational dates based on ultrasound findings when discrepancies arise with menstrual dates. To minimize the risk of neonatal respiratory distress syndrome, elective caesarean sections should ideally be performed at 39 completed weeks or later. Long-term risks associated with caesarean births include potential alterations in immune development, an increased likelihood of allergies, atopy, and asthma, as well as changes in gut microbiota in infants, which may predispose them to obesity and metabolic syndrome later in life.

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