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# How can obstetrical anaesthesiologists help in reducing the rate of caesarean delivery?

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Dear Editor,

Caesarean deliveries (CDs), medically indicated or not, are associated with an increased risk of maternal death, blood transfusion, hysterectomy, intensive care unit admission, and various childhood health conditions [1]. Nevertheless, CD rates have increased globally in the last 20 years [2], reaching an all-time high of 32% in the USA in 2019 [3], and as high as 48.7% in 17 major Chinese cities in 2008 [4]. The World Health Organization no longer recommends CDs for specific indications and warns against unnecessary CDs [5]. Obstetrical anaesthesiologists can play a very significant role in reducing the CD rate.

Many complex factors contribute to high CD rates, including primary CDs, trial of labour after caesarean (TOLAC), and CD on maternal request without maternal or fetal indications [6]. Particularly, high rates of CD on maternal request (0.2–42.0%) globally indicate that fear of labour pain may be a prominent cause [7]. Anaesthesiologists, as pain management specialists, play an important role in CD on maternal request. Studies have shown that 81% of Chinese women and 85.5% of Iranian primigravidae prefer CD to avoid experiencing pain [8, 9]. Furthermore, another study found that 60% of parturients initially deciding on CD opted instead for vaginal delivery (VD) when informed that labour epidural analgesia (LEA) was available [10]. By introducing LEA and 24/7 anaesthesia service on obstetric units, the No Pain Labor and Delivery-Global Health Initiative (NPLD-GHI) demonstrated anaesthesiologists' unique role in reducing CDs on a large scale applying to 20% of the world population [11]. Impact studies have shown that when LEA availability was increased from 0–5% to 34–83%, CD rates decreased significantly [11]. Additionally, by decreasing the rate of CD on maternal request, LEA use is also associated with less postpartum blood transfusion and better neonatal outcomes [12–14].

Anaesthesiologists are also safeguards for TOLAC. TOLAC, recommended by the American College of Obstetricians and Gynecologists (ACOG), has been documented to reduce CDs [1]. About 50% of women with a prior CD agree to TOLAC [15], and if unavailable, more than half would transfer care to a facility that allowed it [16]. In reality, only 13.8% of women have a successful TOLAC [17]. Lack of anaesthesia services is one of the most common factors responsible for a failed TOLAC [18]. ACOG recognizes that "adequate pain relief may encourage more women to choose TOLAC", and recommends that TOLAC "should be attempted at facilities capable of performing emergency deliveries" [18].

Anaesthesia-assisted external cephalic version (ECV) has become routine practice. Recently, evidence revealed that ECV with anaesthesia care safely decreased the likelihood of CD. The success rate of ECV with anaesthesia has been increased by an odds ratio of 2.08–2.59 [19].

As experts in both pain management and critical care, anaesthesio-

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logists can help reduce CD rates by promoting the use of LEA, TOLAC, and ECV. An enhanced anaesthesiologist presence in the rapid response team for catastrophic events (uterine rupture, hypertensive crises, postpartum haemorrhage, etc.) can further improve maternal and fetal safety. Efforts to better incorporate anaesthesia service into labour planning and education can continue to have significant impacts on reducing the CD rate and improving maternal health.

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