

## **Leading Article**

# **The Robson Ten Group classification: will it help to optimize the Caesarean rates?**

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The Ten Group Classification System (TGCS) was introduced in 2001 to classify perinatal outcome, but was first popularized for analyzing caesarean section (CS) rates [1]. The main idea of the system is to prospectively classify women into clinically relevant groups based on category of pregnancy (single cephalic, single breech, single oblique or transverse lie, multiple pregnancy), previous obstetric record (nulliparous, multiparous, multiparous with a previous CS), course of labour and delivery (spontaneous labour, induced labour, CS before labour) and gestational age (preterm or term) (2). TGCS is now widely used, especially in Europe for analysing caesarean section rates and is, according to a systematic review, the most appropriate classification system for analyzing CS rates.

In 2015, the World Health Organisation (WHO), proposed the TGCS as a global standard for assessing Caesarean Section rates at health care facilities (3). Not a single country has applied this classification as a whole in analysing data and determining on making national recommendation. However, it had been used in a few institutions with the objective of standardizing care with changing practices to improve the maternal and perinatal outcomes. These will be unique in terms of incidence and clinical significance within the TGCS and, once collected within the TGCS, data validation and interpretation become easier, more relevant and more rewarding. Overall caesarean section rates are unhelpful, and caesarean section rates

should not be judged in isolation from other outcomes and epidemiological characteristics. Better understanding of caesarean section rates, their consequences and their benefits will improve care, and enable learning between delivery units nationally and internationally. (4)

The caesarean section rate increased overall between the two surveys from 26.4% in the WHOOGS to 31.2% in the WHOMCS,  $p=0.003$  (WHO Global Survey of Maternal and Perinatal Health (WHOOGS; 2004–08) and the WHO Multi-Country Survey of Maternal and Newborn Health (WHOMCS; 2010–11),) and in all countries except Japan. Use of obstetric interventions (induction, prelabour caesarean section, and overall caesarean section) increased over time. Caesarean section rates increased across most Robson groups in all HDI categories. Use of induction and prelabour caesarean section increased in very high/high and low HDI countries, and the caesarean section rate after induction in multiparous women increased significantly across all Human Development Index (HDI) groups. The proportion of women who had previously had a caesarean section increased in moderate and low HDI countries, as did the caesarean section rate in these women. (5)

This ten-group classification is more or less an audit to assess the overall quality of care how it affects the maternal and perinatal outcomes. This may not bring the cs rates down in institutions with high section rates unless the indications are rationalized in each group of ten. Parity, lie of the baby, onset of labour

and gestational age affects the outcome of the labour and delivery. (6)

Extreme views on low or high rates of caesarean section are not helpful, especially if the arguments are based on selected evidence. Discussions about reducing caesarean section rates without taking other factors into account are at best inappropriate and at worst dangerous. On analysing the increased caesarean rates, it has been shown to increase in first pregnancies due to the demand based on the uncertainty of the labour outcome by the woman leading to vaginal delivery and in subsequent pregnancies due to ill treatment or the worse experience in the previous vaginal deliveries. Induction of labour for non-clinical indications have shown to be increased without improving perinatal outcome. Failed inductions contribute to increases in cs rates. Analysing the TGCS in 2 and 4 groups with indications and the perinatal outcome could reduce the number of inductions and cs rates in those two groups. Judicious use of oxytocin for dysfunctional labour in group one and three may reduce prolonged labour and complications especially postpartum complications like postpartum haemorrhage.

There seems to be very low threshold for caesarean sections in medically indicated women. The reasons include (1) different views on the management of labour and delivery, organisational issues; and (2) societal intolerance of poor outcomes and experience, and a culture of blaming individuals or systems (a significant concern among professionals). (7)

Following applications in an institution or a unit could be helpful in achieving improved quality of care with better outcomes:

- Classification of information: the 10 groups and describing acceptable ranges of outcomes and events

- Assessment of management and interpretation of data
- Modification of management improving processes.
- Audit: When, who, how, why prelabour, labour and post-delivery outcome and events applying in to TGCS and auditing cycle will hope to improve maternal and perinatal outcomes. (7)

Efforts to reduce C-section rates typically involve a combination of factors, including:

- Medical Guidelines: Ensuring that medical guidelines for obstetric care are evidence-based and followed appropriately. This may include encouraging vaginal birth after cesarean (VBAC) when clinically appropriate.
- Education and Training: Ensuring that healthcare providers are well-trained in techniques to manage labor and delivery effectively, reducing the need for C-sections in non-medically necessary situations.
- Patient Education: Providing expectant mothers with information about the risks and benefits of C-sections versus vaginal deliveries and involving them in the decision-making process.
- Quality Improvement: Hospitals and healthcare systems can implement quality improvement initiatives to monitor and reduce unnecessary C-sections.
- Continuous Monitoring: Regularly reviewing C-section rates and the reasons behind them, as well as implementing strategies to address any identified issues.

The Robson Ten Group Classification can be a valuable tool in these efforts by providing data and insights that help healthcare providers and policymakers target specific groups where C-section rates may be higher and develop strategies to address the underlying causes.

However, it is just one component of a broader strategy to reduce C-section rates, and its impact depends on how it is used in the context of a comprehensive approach to improving maternity care.

Medical practices and guidelines are changing over time, therefore, reviewing more recent literature and guidelines for the most up-to-date information for the applications in clinical practice is recommended.

## References

1. Robson MS. Classification of caesarean sections. *Fetal Matern Med Rev* 2001;12 (01):23–39.
2. Torloni MR, Betran AP, Souza JP, et al. Classifications for cesarean section: a systematic review. *PLoS One* 2011;6(1)e14566
3. WHO. WHO statement on caesarean section rates. 2015.
4. Robson M, Murphy M, Byrne F. Quality assurance: the 10-Group Classification System (Robson classification), induction of labor, and cesarean delivery. *Int J Gynecol Obstet* 2015;131(Suppl. 1):S23–7.
5. The ancet global health. Volume 3, Issue 5, May 2015, Pages e260-e270
6. Robson MS, Scudamore IW, Walsh SM. Using the medical audit cycle to reduce cesarean section rates. *Am J Obstet Gynecol* 1996;174(1 Pt 1):199–205
7. Best Practice & Research Clinical Obstetrics & Gynaecology Michael Robson Volume 27, Issue 2, April 2013, Pages 297-308

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