New realm of placenta accreta spectrum disorder: are we doing enough?

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Placenta accreta spectrum (PAS) is described as an abnormal adherence of the placental trophoblast to the uterine myometrium.[1] Until 1950, majority of PAS disease were due to manual removal of placenta or rigorous curettage. The situation in present world is altering where more than 90% of the PAS disorder are amongst women who have undergone previous caesarean sections (CS).[2] Silver et al. asserts that with increase in the CS deliveries there is a significant increase in the PAS disorder in subsequent pregnancies.[3] The increasing PAS is not exclusively a consequence of caesarean delivery, rather other conditions amongst primiparous women could be a history of operative hysteroscopy, a surgical termination, an endometrial ablation, or suction curettage etc[4]; however their contribution in the low-and-middle-income countries (LMICs) would be nominal.

The emergence of this condition as a serious complication is underscored by the rising number of research studies pertaining to 'placenta accreta'. Increase in the CS rates both globally and within India is a matter of concern.[5] Researchers have reported that the CS rates have increased from just 7% in 1990 to close to 50% in several countries. If the current trend continues, by 2030 global rates are likely to be 63% in Eastern Asia, 54% in Latin America and the Caribbean, 50% in Western Asia, 48% in Northern Africa, 47% in Southern Europe and 45% in Australia and New Zealand.[6] This is more worrisome in India as one in every five pregnant women had a CS even if they didn't require one medically.[7] CS rates in India and majority of the high/low-middle income countries, have surpassed the WHO threshold of 15%.[5] These numbers not just present the situation of CS deliveries globally, rather with the increasing trend, PAS disorders are also likely to rise proportionately. This demands institution of proper monitoring mechanisms to assess the need of CS, especially when performed electively.

The increasing CS rates would result in grand multiparous women with multiple CS scars having extended invasion of placental villous in subsequent pregnancies and thus would increase the burden of PAS disorders. Complications due to PAS disorders could lead to maternal mortality due to severe antepartum and intraoperative haemorrhage.[8] There exists multiple challenges in the management of this spectrum disorder, which needs to be managed by a multidisciplinary care team approach which primarily involves early prenatal diagnosis and later preparing for a surgical management. Considering the adversities in the case management, availability of trained human resources, health services accessibility and availability in the LMICs it is not wrong to quote that this is the high time when the submerged part of the iceberg needs to be explored, by undertaking a timely and relevant surveillance, screening, measuring the actual burden of PAS disorder, doing need assessment and service planning.

The development of FIGO consensus guideline on PAS disorder provides a comprehensive overview on the issues pertaining to the epidemiology, diagnosis, conservative and surgical management of PAS disorders.[1,9] An international registry referred to as "International Society for Placenta Accreta Spectrum IS-PAS" is a shared database of PAS cases.[10] However, the utility of such databases is still compromised in LMICs. This necessitates the need of such regional registries to understand the magnitude of the problem, to get insights on the pattern of development of such cases, approaches for clinical management and to develop high quality research for the education of the healthcare providers and patients. This would not have direct implication on reducing the risk factors, rather would provide evidence for decision making at the policy level.

There are published literatures suggesting that the place of caesarean positively modifies the development of large niches and PAS.[11] This in turn depends on multiple factors in isolation or combination such as low incision location, anatomical and patients factors like BMI, age of mothers etc. However, not much attention of the practicing physicians could be drawn due to dearth of evidence. This change in the site of caesarean incision could be adopted easily and thus authors recommend this as a long-term goal and be adopted in the training modules of practising surgeons.

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PAS being one of the most serious conditions associated with pregnancy, remains undiagnosed before delivery in almost half to two-thirds of cases, thus building a strong case for primary prevention is necessary. Country-specific strategies for early case detection, developing cause specific interventions and later management could be way forward. Standardization of clinical and ultrasonic diagnosis approach to PAS disorder[9] would ensure early diagnosis and better clinical management, thus antenatal detection by ultrasound and then stage-appropriate interdisciplinary management should be incorporated in the clinical management protocol.

In this era of evidence-based decision making we need evidence for better policy recommendations. Within this context, we strongly urge to have 'PAS disorder registry' to analyse the burden, to record and report such cases at national and regional level. This also calls for immediate attention of obstetricians and public health professionals to carefully monitor the trends of rising CS and institute appropriate guidelines to improve early detection of risk factors, antenatal diagnosis, and management during the intrapartum period.

Contributors

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Declaration of interests

There are no conflicts of interest.

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References

1 Jauniaux E, Ayres-de-Campos D, FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO consensus guidelines on placenta accreta spectrum disorders: introduction. *Int J Gynaecol Obstet*. 2018;140(3):261–264.
2 Jauniaux E, Silver RM, Matsubara S. The new world of placenta accreta spectrum disorders. *Int J Gynaecol Obstet*. 2018;140(3):259–260.
3 Silver RM, Landon MB, Rouse DJ, et al. Maternal morbidity associated with multiple repeat cesarean deliveries. *Obstet Gynecol*. 2006;107(6):1226–1232.
4 Tsolakidis D, Zouzoulas D, Pados G. Pregnancy-related hysterectomy for peripartum hemorrhage: a literature narrative review of the diagnosis, management, and techniques. *Biomed Res Int*. 2021;2021:9958073.
5 Pandey AK, Raushan MR, Gautam D, Neogi SB. Alarming Trends of Cesarean Section-Time to Rethink: Evidence From a Large-Scale Cross-sectional Sample Survey in India. *J Med Internet Res*. 2023;25:e41892.
6 WHO. Caesarean section rates continue to rise, amid growing inequalities in access [internet]. Available from: https://www.who.int/news/item/16-06-2021-caesarean-section-rates-continue-to-rise-amid-growing-inequalities-in-access. Accessed November 3, 2022.
7 Kumar P, Dhillon P. Household- and community-level determinants of low-risk caesarean deliveries among women in India. *J Biosoc Sci*. 2021;53(1):55–70.
8 Huang J, Zhang X, Liu L, et al. Placenta accreta spectrum outcomes using tourniquet and forceps for vascular control. *Front Med (Lausanne)*. 2021;8:557678.
9 Jauniaux E, Chantraine F, Silver RM, Langhoff-Roos J, for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO consensus guidelines on placenta accreta spectrum disorders: epidemiology. *Int J Gynecol Obstet*. 2018;140(3):265–273.
10 Chantraine F, Stefanovic V, Braun T, et al. When a rare condition creates a scientific society: the history of the International Society for Placenta Accreta Spectrum (IS-PAS). *Acta Obstet Gynecol Scand*. 2021;100(S1):3–6.
11 Armstrong F, Mulligan K, Dermott RM, et al. Cesarean scar niche: an evolving concern in clinical practice. *Int J Gynecol Obstet*. 2022. https://doi.org/10.1002/ijgo.14509.