

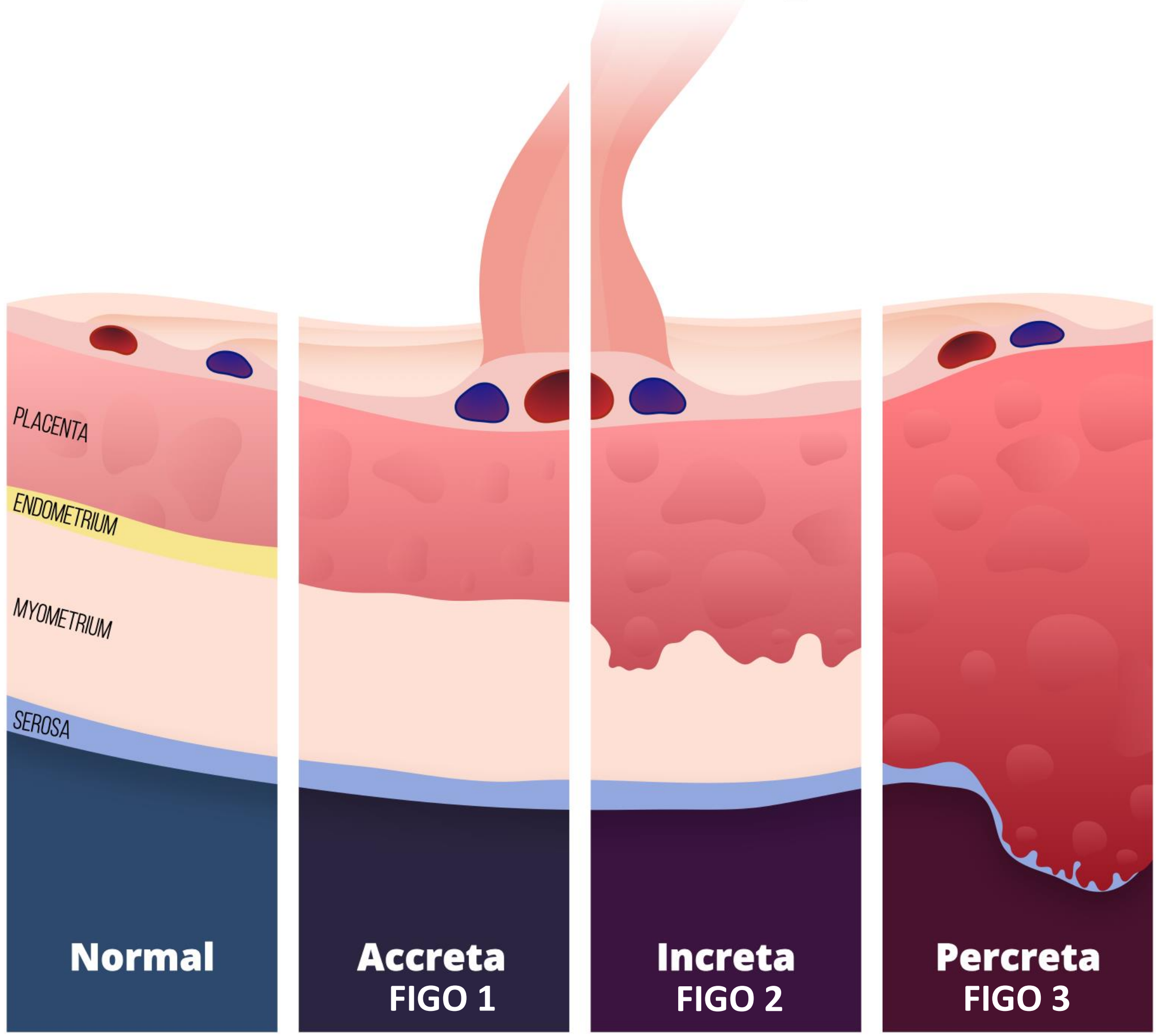
First Breaths After a High-Risk Caesarean: Neonatal Outcomes in Placenta Accreta Spectrum and the Impact of General Anaesthesia

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Introduction

Placenta accreta spectrum (PAS) occurs when the placenta becomes abnormally adherent or invasive. It presents many anaesthetic challenges and has related maternal and foetal morbidity. The anaesthetic technique varies considerably with no consensus on the optimum approach.¹ General anaesthesia has been shown to be associated with lower APGAR scores and increased requirement of neonatal resuscitation compared to neuraxial anaesthesia for Caesarean delivery.²

Placenta accreta spectrum



Case courtesy of Frank Gaillard, Radiopaedia.org, rID: 167145

Methods

Centre	Sheffield Teaching Hospitals (STH), a referral centre for PAS
Ethics	Audit department approval
Data	Patients with PAS prospectively consented for inclusion in PAS database at STH
Period	Data retrospectively analysed for patients delivered between 10/11/2010 and 28/04/2025
Analysis	Outcomes - method of anaesthesia, neonatal resuscitation and APGAR scores. Fisher’s exact test was used to compare neonatal intubation requirements.

Results

During this period, 83 patients with PAS gave birth to 87 neonates.

The most common method of anaesthesia was a general anaesthetic (GA) prior to start of surgery +/- neuraxial anaesthesia (79.5%).

Neonates whose mother had a GA from start of surgery were significantly more likely to require intubation (p = 0.0086).

GA from start of surgery, compared to spinal or spinal converted to GA, was associated with increased levels of neonatal resuscitation, as was increasing FIGO classification.

GA from the start and increased FIGO classification was also associated with decreased APGAR scores at one and five minutes.

Discussion

General anaesthesia prior to start of surgery was used for most cases. This was associated with increased rates of neonatal intubation and decreased APGAR scores at one and five minutes. There is wide variation in anaesthetic method for patients with PAS, our data suggests there may be improved neonatal outcomes when neuraxial anaesthesia is used prior to delivery. Confounding factors may include extent of pathology and gestation at delivery.

References

Jasinski T., Remesz A., Resko R., Budyhko A., Majdylo K. Anesthetic management for patients with placenta accreta spectrum: a scoping review. *Journal of Clinical Medicine*. 2025;14(13):4738.

Kearns R.J. et al. Neonatal and early childhood outcomes following maternal anaesthesia for cesarean section: a population-based cohort study. *Regional Anesthesia and Pain Medicine*. 2021;46(6):482-489.

Method of neonatal resuscitation by FIGO classification and mode of anaesthesia

