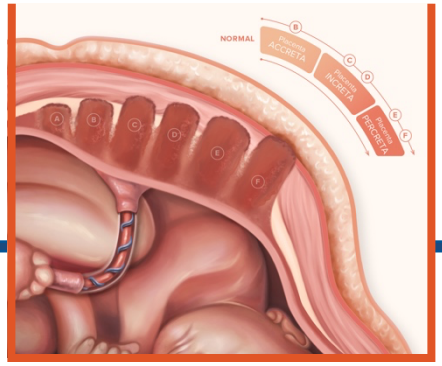
pasclinic
Placenta Accreta Spectrum Clinic



Placenta Accreta Spectrum

Placenta accreta spectrum (PAS) disorder refers to a range of pathologic adherence of the placenta to the myometrium. This is thought to develop due to a defect of the endometrial-myometrial interface, which allows for abnormally deep placental implantation. This prevents normal placental separation; attempts at placental removal are usually associated with severe hemorrhage.[1] Patients with placenta accreta have improved outcomes when delivery is planned at a tertiary care centre with a multidisciplinary team experienced in managing the condition.[1]

Important Risk Factors

Most cases occur in the presence of a uterine scar, most commonly from Cesarean delivery, with overlying placenta. Defects of the endometrium can also result from myomectomy, hysteroscopic resection of uterine septum or synechiae, or repeated uterine curettage. Prior retained placenta with manual removal, endometrial ablation, and uterine artery embolization are also independent risk factors for placenta accreta.[1]

How is it diagnosed?

Ultrasound is highly reliable when performed by a skilled operator with experience in diagnosing placenta accreta, and is the main modality used in prenatal assessment. MRI may be used as an adjunct to ultrasound in some cases. Similarly, the diagnostic value of MRI is highest when performed by experts in diagnosing placenta accreta spectrum. [2]

IF YOUR PATIENT IS AT RISK

1) Please see the attached referral form for the PAS Clinic
   If the patient meets referral criteria, fax the referral form and patient records to 604-520-4183. Early referral is highly preferable in order to be organize multidisciplinary team for diagnosis and delivery.

2) Provide patient information sheet to your patient.

3) Prescribe iron supplementation, except for rare patients with contraindications, eg. Hemochromatosis.
   Target hemoglobin >110g/L and ferritin >50ug/L

4) **Continue routine prenatal care.**

What happens after my patient is referred to the PAS clinic @ RCH?

When a referral is received, the patient will be referred to an obstetrician at Royal Columbian Hospital (RCH) who is associated with the PAS clinic to coordinate management. The patient will be booked for ultrasound with Fraser Maternal-Fetal Medicine. An MRI may also be arranged. Preanesthetic consultation will be completed for patients intended to deliver at RCH (see more below). **Ongoing routine prenatal care should continue with the patient's primary maternity provider.**

Depending on the patient's underlying clinical risk factors and imaging, if the patient is felt to be at low risk for placenta accreta, they may be discharged with a plan to deliver at their referring centre.

Will my patient deliver at RCH?

Yes, if placenta accreta is suspected. Standard management consists of planned Cesarean hysterectomy, without attempt to deliver the placenta, and bilateral salpingectomy through midline incision around 35-36 weeks. Delivery may be an at earlier gestational age in the presence of antepartum hemorrhage or other risk factor for preterm birth. Adjunctive measures may include placement of ureteric stents, bilateral internal iliac artery ligation, or insertion of internal iliac artery balloons. When the diagnosis is unclear, the above measures may be adjusted, including consideration of transverse skin incision or attempt at placental delivery.

Some patients may request fertility-sparing management. This is generally associated with increased maternal morbidity, and is considered on a case-by-case basis.

[1]SMFM Obstetric Care Consensus #7. Placenta Accreta Spectrum. 2018. [2] Jauniaux ERM et al. "Placenta Praevia and Placenta Accreta: Diagnosis and Management." Green-top Guideline No. 27a. BJOG 2018.
[3] Carusi D. "The Placenta Accreta Spectrum: Epidemiology and Risk Factors." Cl Ob Gyn. 2018: 61(4):733-742.

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PAS CLINIC TEAM

- PAS nurse and coordinator
- Obstetricians and Gynecologists
- Maternal Fetal Medicine Specialists
- Radiologists
- Anesthesiologists
- Pathologists
- Neonatologists
- Intensivist

Multidisciplinary Care Teams

PAS is a highly complex and potentially morbid disorder, which demands an experienced care team with access to resources. Both the Society of Obstetricians and Gynecologists of Canada (SOGC) and The International Federation of Gynecology and Obstetrics (FIGO) recommend multidisciplinary team care within Centers of Excellence for PAS disorders.[1]

The evidence is clear:

- A multidisciplinary approach to diagnosis, antenatal care, and management of patients with PAS disorders improves maternal morbidity on a variety of metrics
- Formalized PAS programs allow streamlined data collection, which enables development of standardized protocols and enhanced patient care
- PAS Centers of Excellence are the ideal environment in which to conduct quality improvement research, contributing to an ever-growing body of literature, and allowing for knowledge translation between centers and at the population-level

Improving Patient Outcomes

Given the serious maternal morbidity, there has been an increase in the development of regional referral centers for patients with PAS in North America. The literature continues to support this approach in management, with extensive data documenting significant reductions in metrics of maternal morbidity with a Center of Excellence care model. Two studies from Canada and many more from the United States that compare patient outcomes before and after implementation of a formalized PAS program demonstrate this well.

A 2019 retrospective review from the Jewish General Hospital in Montreal, Quebec, examined 50 cases of PAS, all of whom were treated by a single surgeon and underwent cesarean hysterectomy.[2] They reported lower EBL (1.4L) and transfusion rates (34%) when compared to the literature, perhaps underscoring the importance of having a highly experienced treating provider.[3]

In 2012, a prospective cohort study was published in Mount Sinai Hospital in Toronto, Ontario, examining the implementation of a multidisciplinary team strategy, comprised of 6 major components: Maternal-Fetal Medicine consultation, MRI, Gynaecologic surgery consultation, Interventional Radiology consultation, Obstetric Anaesthesia consultation, and elective surgery by a pre-determined and experienced team. They examined 33 cases and utilized a 5-point composite severe maternal morbidity score, and concluded that patients whose care included more strategic components had a significant reduction in maternal morbidity.[4] After implementing a multidisciplinary approach, the authors showed a 50% reduction in EBL, significantly fewer allogenic transfusions (25% vs. 61.5%), and a shorter time interval from delivery to discharge from hospital (3 days from 5 days)[5]. Interestingly, they also noted a significant increase in the proportion of placenta percreta (a more invasive subtype of PAS disorder) from 46.1% to 78.1% over the course of the decade, which may be a harbinger of increasingly complex cases moving forward.[6]

Gold Standard of Care at Royal Columbian Hospital

RCH is a Tier 6 maternity hospital enabling the management of the most medically and surgically complex patients. Early referral to our multidisciplinary team is therefore the best option for patients to receive the gold standard of care in British Columbia.

Patients at RCH have access to:

- Obstetric ultrasonography with experience in PAS disorders
- MR imaging with experienced radiologists
- A Level III maternity unit
- Adult ICU
- Obstetric anaesthesiology
- Hematology
- Massive transfusion capacity
- Cell salvage and perfusionist services
- A specialist surgical team available (including urogynecology/urology, vascular surgery, and general surgery)
- Interventional radiology
- Level III NICU
- Adequate surgeon-volume caseload[7]

More info: www.pasclinic.ca
Referral Form

[1,7]Hobson et al., 2019; Allen et al., 2018. [2,3]Mitric et al., 2019. [4]Walker et al., 2013. [5,6]Hobson et al., 2021.