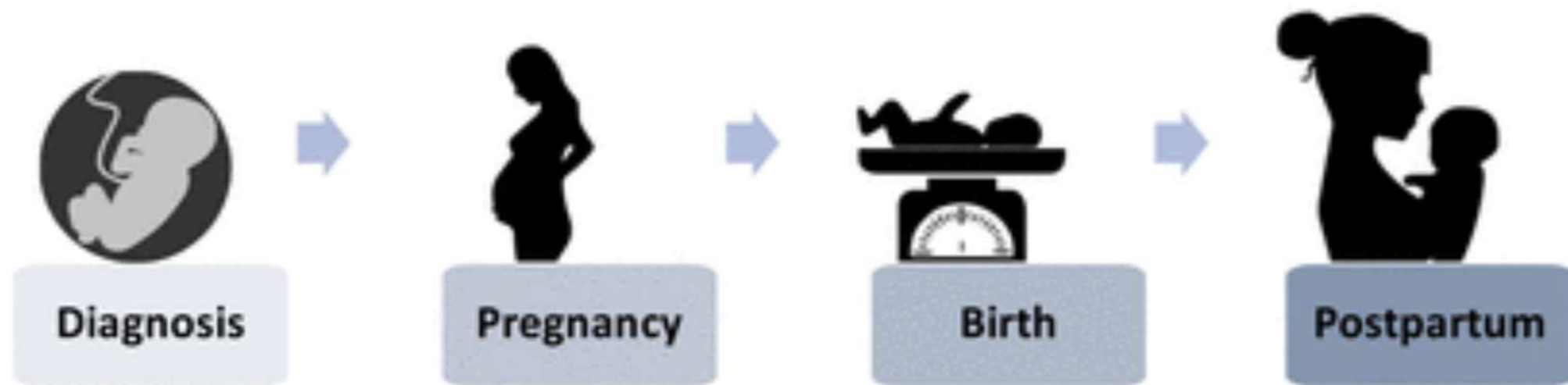


Management of patients with suspected placenta accreta spectrum

Dr Elena Lynes



Objectives

Risk factors for placenta accreta spectrum (PAS)

Anaesthetic management for patients with suspected PAS

Unexpected PAS management strategy

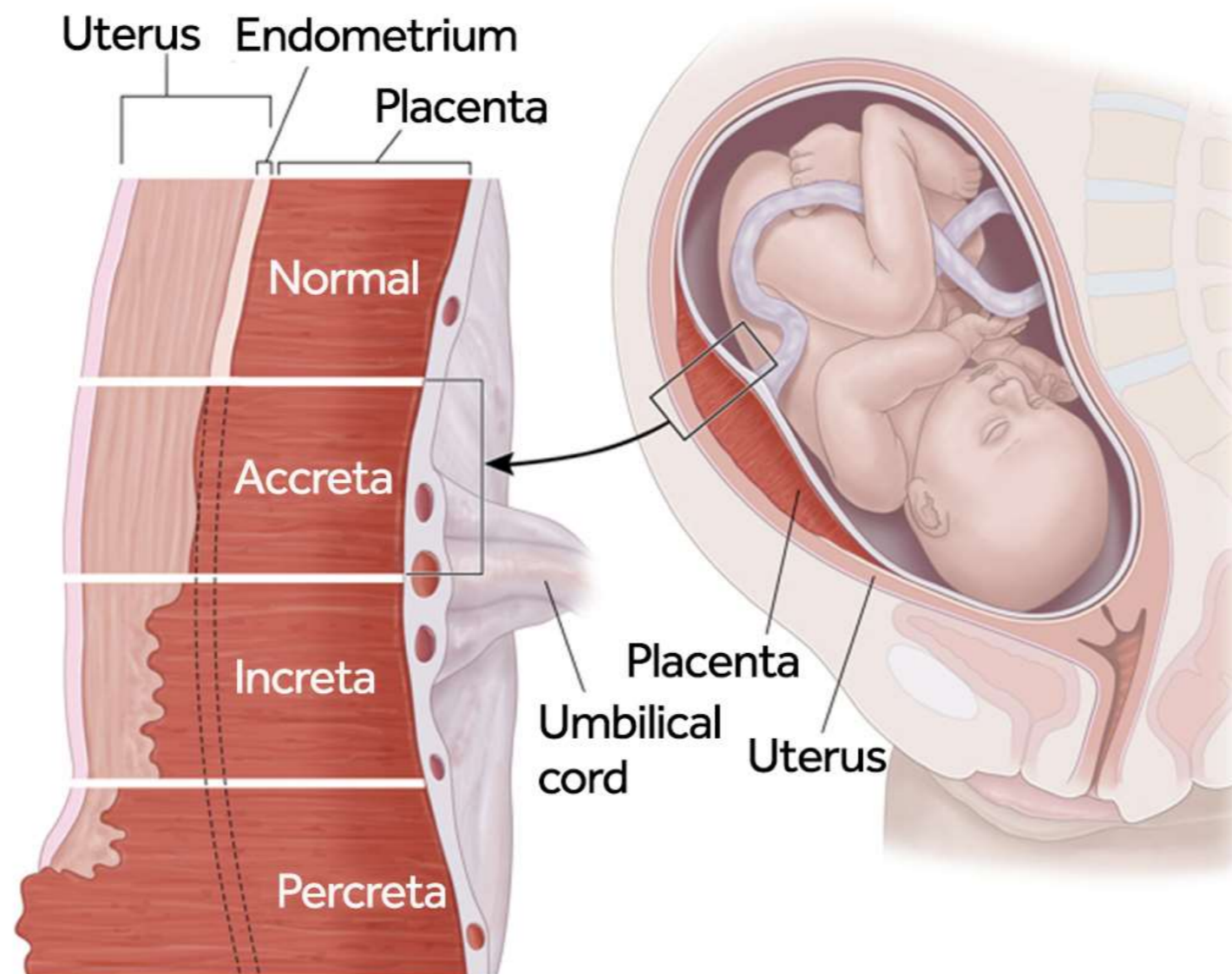
What is placenta accrete spectrum (PAS)?

PAS refers to the range of pathologic adherence of the placenta:

Accreta - placenta villi adhere to myometrium

Increta - invasion of myometrium

Percreta - invasion through myometrium



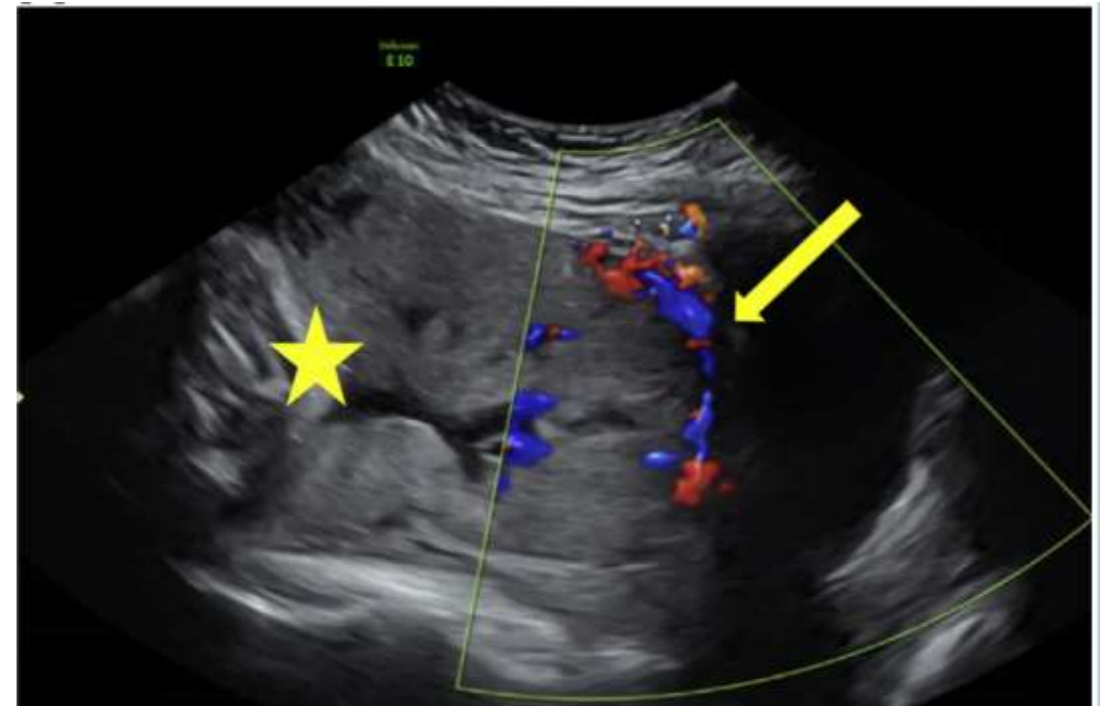
Risk factors

- Surgery or manipulation of endometrium:
 - Caesarian section
 - Myomectomy
 - Curettage
 - Hysteroscopy
 - Endometrial ablation
- Placenta praevia with previous Caesarian section
- IVF
- Asherman's syndrome
- Multiparity
- Advanced maternal age

Diagnosis

- Ultrasonography is primary diagnostic modality
 - Placental lacunae or 'lakes' with or without turbulent blood flow on Doppler imaging
 - Abnormalities of the uterine-bladder or uteroplacental interface
 - Myometrial thickness of <1 mm

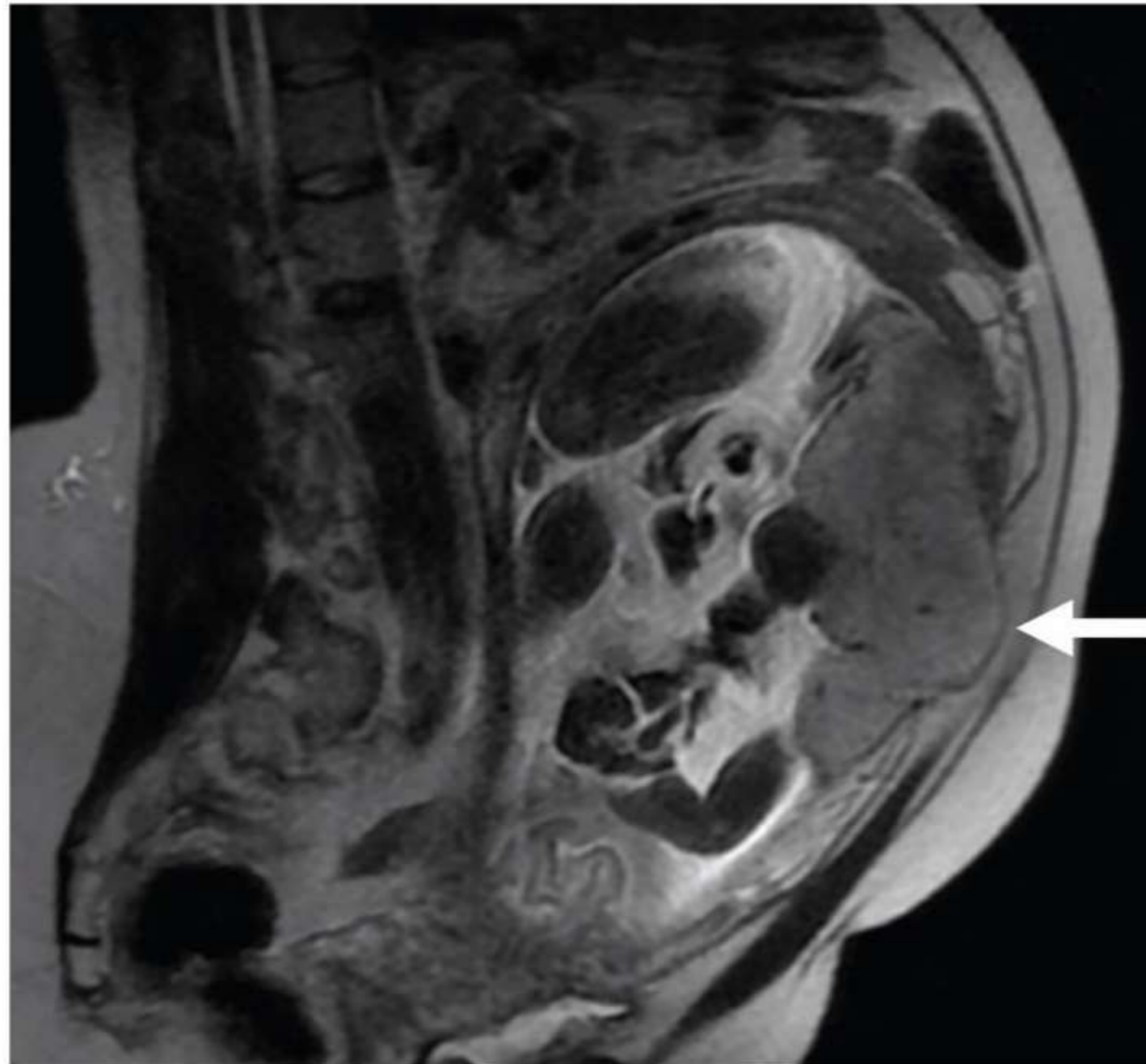
- Magnetic resonance imaging (MRI)
 - Dark intra-placental bands represent fibrin deposition with T2 imaging
 - Disruption between the uterus and placenta
 - Abnormal placental bulging



Ultrasonographic evidence and specimen confirmation of placenta in creta.

Ultrasonography at 30 weeks, 6 days demonstrating placenta praevia, placental lakes (star), increased vascularity at the bladder-myometrial border (arrow) and loss of distinction between the placental-myometrial border anteriorly and the myometrial-bladder border laterally.

Noncontrast magnetic resonance imaging in a 37-year-old woman at 31 weeks, showing an area of placental invasion through the upper anterior uterus (arrow) and possibly into the anterior abdominal wall.



Deirdre O'Connor, and Anne Berndl CMAJ 2018;190:E168

CMAJ·JAMC

Planing for delivery

- Timing - between 35 and 36+6 weeks gestation
- Antenatal glucocorticosteroids - between 34-36 weeks
- Delivery at tertiary maternal centre, consider transfer if PAC suspected
- Non-specialised centres need to have emergency plans in place
- Bleeding or preterm labour can necessitate delivery
- Multidisciplinary collaboration
- Specify location for planned delivery - communication between staff and alignment of resources

Anaesthetic assessment

- Obstetric anaesthetic consultation
- Counselling before admission
- History including anaesthetic
- Anaesthetic options
- Mother's preferences and concerns
- Expectations
- Detection of anaemia and treatment of iron deficiency anaemia
- Blood transfusion/cell salvage
- Patients declining blood transfusion must be identified



Anaesthetic technique

- Neuraxial anaesthesia
 - Could be safely performed
 - Facilitates first hand experience
 - Avoids risks of GA
- Conversion to GA
 - Part of the plan
 - Airway oedema due to resuscitation
 - Facilitate surgical exposure
 - Inadequate pain control
 - Aware of hypotension
- General anaesthesia
 - Better conditions and control
 - Lengthy procedure
 - Not at the time of instability

- Choice of vascular access
 - Large-bore cannulae x 2
 - CVC line?
 - Trauma line/ PA catheter sheath
 - Arterial line
- Echocardiography in theatre
 - Transoesophageal echo
 - Transthoracic echo
 - Assess maternal volume status
 - Guide resuscitation

Surgical intervention

- Discuss plan with obstetrician!
- Most common caesarian hysterectomy
- Classical CS
- Consider dorsal lithotomy position for better visualisation of blood loss
- Ureteric stents, benefits unknown
- Removing placental tissue
- Leaving placenta in situ
- Delayed hysterectomy



Uterus and placenta post-Caesarean delivery/hysterectomy, with a densely adherent placenta and large circumferential placental bulge. The fundus has a classical hysterosotomy closure (arrow). The hypervascularised placenta can be visualised in the low uterine segment, overlying the cervical os (star).

- Vascular occlusion technique
 - Prophylactic balloon occlusion of the internal iliac arteries
 - Resuscitative endovascular balloon occlusion of aorta (REBOA) catheter
 - Epidural need to precede catheter placement
 - Local thrombosis possible if TXA used with REBOA
 - Advisable for patients refusing transfusion

- Management of PPH

- Prepare for haemorrhage
- Blood loss can exceed 2000 ml
- Ongoing monitoring and communication essential
- Theatre equipped with fluid warmers, blood IV sets, rapid infusion devices, cell salvage
- Blood cross-matched and available in theatre 4 units RBC, 4 FFP and further RBC, FFP and platelets ready to go.
- Communicate with blood bank
- Activate MOH protocol in rapid, unstable bleeding.
- Consider Cryoprecipitate or fibrinogen concentrate
- Monitor, measure and record blood loss
- Avoid giving prophylactic uterotonics unless uterine atony post placenta removal
- Use of cell salvage

- Management of Coagulopathy
 - Standard coagulation tests over 30 min, APTT and PT can remain normal until loss exceeds 4-5 L
 - Use of ROTEM or TEG provide real time information of global coagulation and guide transfusion.
 - Avoids fixed ratio transfusion and lower overall transfusion rate and circulatory overload
 - Hypothermia and acidosis should be avoided
 - TXA 1g, followed by second 1g if bleeding ongoing at 30min

Unexpected PAS

- Massive obstetric protocols should be in place
- Mechanisms to escalate care
- Pause delivery if PAS suspected
- Anaesthetic goals:
 - Maintain haemodynamic stability
 - Massive transfusion
 - Quantitative blood loss methods
 - Regular blood tests
 - Close communication with obstetrician
 - MOH activation
 - Additional peripheral access and arterial line
 - GA might be needed
 - Additional resources mobilisation

Postoperative care

- Surveillance and management of complications
- Monitoring:
 - Ongoing bleeding
 - Anaemia
 - Fluid overload
 - Multi-organ dysfunction
- ITU admission:
 - Ongoing vasoactive infusions
 - Intubated patients
 - Fluid overload
 - Pulmonary oedema
 - Coagulopathy
- Debrief
- VTE prophylaxis recommended
- Pain management
 - Multimodal analgesia/ truncal blocks

Conclusion

- Recognition of the risk factors and identifying patients with suspected PAS is key.
- Multidisciplinary planning with experienced teams essential.
- Deliver at a tertiary care centre between 34 and 36 weeks' gestation.
- Prompt resuscitation and management of PPH and coagulopathy are vital.
- Algorithm for MOH to manage unanticipated cases of PAS.
- Neuraxial anaesthesia can be safe and effective for patients with PAS.

Questions?

