PLACENTA PRAEVIA ACCRETA

ERIC JAUNIAUX
Institute for Women Health
University College London

RCOG WORLD CONGRESS 2017
No conflict of interest to declare

LEAD DEVELOPER FOR:
- Green-top Guideline No. 27: Placenta Praevia, Placenta Accreta and Vasa Praevia: Diagnosis and Management (Due end 2017).
- FIGO guidelines on Placenta accreta (Due early 2018 in IJGO).
WHAT IS PLACENTA ACCRETA ??
Severe obstetric complication involving an abnormally deep attachment of the placenta, through the endometrium and into the myometrium.

Occurs where the placenta attaches itself too deeply into the wall of the uterus.

May occur if the placenta attaches itself too deeply into the wall of the uterus.

Placenta praevia + previous CS/surgery ??
PLACENTA ACCRETA: Definition

**CLINICAL:** “The abnormal adherence of the afterbirth in whole or in parts to the underlying uterine wall”.

**HISTOPATH:** “The complete or partial absence of the decidua basalis”.

PLACENTA ACCRETA: Definition

Irving & Hertig: 18 CASES OF SUPERFICIAL ADHERENT PLACENTA (VERA OR ADHERENTA)
⇒ 18 INTRAPARTUM PPH
⇒ 14 SECONDARY HYSTERECTOMY (4 CASES?)
⇒ 1 PRIOR CS (MR, D&C, ENDOMETRITIS)
Lukes et al (AJOG, 1966) => differentiate between abnormally adherent and abnormally invasive placenta and suggested to use the "adherent or invasive placenta" to describe the over-all group of PA
ACCRETA vs Manual removal

Invasive villi are anchored within the myometrium and cannot be removed manually. => Difficult placental manual removal (‘sticky placenta) is not PA. => Can explain the over-diagnosis of PA in many cases series (1 in 300).
Jauniaux et al, AJOG 2016
⇒ SR of 38 case reports & 58 cases series (1078 cases) diagnosed prentally (US).
⇒ No data on the depth of villous invasion in 23 series.
⇒ 7 used morbidly adherent placenta (MAP); 2 abnormally invasive placenta (AIP) + advanced invasive placentation + abnormal myometrial invasion.
STANDARDIZED TERMINOLOGY

. MAP is exclusive of invasive accreta.
. AIP is exclusive of adherent accreta.
. Adherent & invasive villi may co-exist in the same placenta accreta.

=> PLACENTA ACCRETA SPECTRUM (PAS)
EPIDEMIOLOGY
PAS & the modern CS

Kerr JMM., The technique of cesarean section, with special reference to the lower uterine segment incision, AJOG 1926.


C-S rates (%)
UK: 1980=> 9%
2004=> 23%
2016=> 28-30%
USA 2016=> 32->50%
China 2016=> 40->55%
Netherlands 2015=> 15%

PA rates (per deliveries)
1937=> 1:30000
1980=> 1:2500
2011=> 1:1500
2016=> 1:300-1:1000
PAS: A 21st century disease

CAESAREAN SECTION (95%)

TOP/D&C/ERPC.
Endometritis.
Myomectomy.
IVF procedures.
Endometrial resection.
Uterine artery embolization.
Bicornuate uterus.
Adenomyosis.
Submucous fibroids.
Myotonic dystrophy.
IUD.

If the CS rates continue to rise as they have in recent years, by 2020 in the USA it will be **56% on average!!!**

=> Per annum: additional 6236 placenta praevias, 4504 PA & 130 maternal deaths.

(Solheim et al., JMFNM 2011)
CS & Placenta praevia

- RR of 1.5 (Getahun et al., 2006).
- Adjusted OR of 1.47 (Yang et al., 2007).
- Overall pooled random effects OR of 2.20 (Gurol-Urganci et al., 2011).
- OR of 1.47 (Klar et al., 2014).

=> 1 prior CS = 50% increase/ 2 prior CS = 200%
UNDIAGNOSED PAS

NO PLANE OF CLEAVAGE. Attempts to remove the accreta tissue *provoke* massive haemorrhage & a cascade of shock + coagulation disorders.

**DIAGNOSIS = POSSIBILITY OF TRANSFER TO SPECIALIST CENTRE** (Silver et al AJOG 2016; Shamshirsaz et al AJOG 2017)
PAS: ULTRASOUND OR MRI

Similar sensitivity/specificity and diagnostic accuracy but MRI not widely available and too expensive for screening.
SR of standardized ultrasound signs proposed by the European Working group on AIP (UOG 2016) applied to 53 case series published in the literature since 1982.

Ultrasound signs

**Grey-scale Parameters (n=52)**

*Loss of clear zone* 50(98.0)

*Myometrial thinning* 34(66.7)

*Placental lacunae* 49(96.1)

*Bladder wall interruption* 30(58.8)

*Placental bulge* 11(22.0)

*Focal exophytic mass* 13(25.5)

**CDI Parameters (n=42)**

*Uterovesical hypervascularity* 20(47.6)

*Subplacental hypervascularity* 36(85.7)

*Bridging vessels* 26(61.9)

*Lacunae feeder vessels* 22(52.4)
SR of cohort studies (n = 14) incl data on 3907 placenta praevia or low lying & prior CS:
- 328 placenta praevia accreta (8.4%).
- 4.1% after 1CS & 13.3% > 2 prior CS.
- 90.9% diagnosed prenatally by ultrasound.
Women requesting elective CS for non-medical indications should be informed of the risk of placenta accreta and its consequences for subsequent pregnancies. [C]

Women with a previous history of CS presenting with an anterior low-lying placenta or placenta praevia at the mid-gestation routine a fetal anatomy scan should be specifically screened for accreta placentation. [D]

Ultrasound imaging is highly accurate when performed by a skilled operator and women with ultrasound features suggestive of placenta accreta should be referred to specialist centre with imaging expertise. [B]

Women with asymptomatic placenta praevia accreta in the third trimester should be counselled about the risks of preterm delivery and obstetric haemorrhage, and their care should be tailored to their individual needs. [B]
CONCLUSIONS

• NEED TO STANDARDISED THE TERMINOLOGY USED FOR THE DIFFERENT GRADES OF ACCRETA PLACENTATION (No MAP/No AIP).

• NEED FOR DETAILED HISTOPATHOLOGY EXAMINATION/CLINICAL DATA FOR ALL NEW (PROSPECTIVE) ULTRASOUND SERIES.

• NEED FOR A STANDARDISED PATHOLOGY EXAMINATION

• NEEDS TO TRANSFER THE DIAGNOSTIC EXPERTISE TO THE SCREENING LEVEL.
THANK YOU

CONGRATULATIONS
IT'S A BOY!