The new world of placenta accreta spectrum disorders (PAS)

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A PubMed (www.ncbi.nlm.nih.gov/pubmed) search of the term “placenta accreta” at the time of writing this editorial generates 2296 hits, including 147 for the year 2017 up to 1st of December and 138 for the entire year 2016. Currently each year records more publication on placenta accreta than the entire period between 1947-1962. There are two different main categories of placenta accreta: the abnormally adherent placenta or placenta creta and the abnormally invasive placenta (AIP). The latter category is divided between placenta increta and placenta percreta depending on the depth of penetration of the villous tissue in the uterine myometrium. As many articles do not differentiate between the two categories and/or do not provide detailed data on histopathology, to be inclusive we have opted to use the term placenta accreta spectrum (PAS) disorders throughout this theme issue of the International Journal of Gynecology and Obstetrics.

The first case of placenta accreta listed on PubMed was reported in 1927 by Dr DS Forster, a scholar in gynaecology in the Pathology Department of the Montreal General Hospital, Montreal, Canada [1]. This case, for which a hysterectomy had to be performed was the only one recorded out of 8 000 deliveries (0.013%) during a 6-year survey at the Montreal General Hospital. This case
predates by a decade the now “classical” cohort study of 18 cases published by
Irving and Hertig who calculated the prevalence of placenta accreta to be 1 in 1,956
deliveries (0.12%) in their study population at the Boston Lying-in Hospital and 1 in
30,000 deliveries in the USA [2]. Eight decades later, the prevalence of PAS has
jumped to around 1 in 500 (0.2%) deliveries in most high and middle-income
countries [3]. In some cases, the high incidence of PAS may due to overdiagnosis
secondary to the inclusion of cases of placental retention in many cohort studies [4].
This may also have been the case in the study of Irving and Hertig as none of their
cases had villous tissue penetrating the myometrium on microscopic examination [2].

The distribution of risk factors and grades of PAS has also completely
changed from the 1930s. The case described by Foster, was a case of placenta
increta following a prior curettage during a second birth and manual removal of the
placenta during a third delivery [1]. Only one of the 20 cases personally treated by
Irving and Hertig occurred after a previous caesarean delivery [2]. Predisposing
factors for PAS in subsequent pregnancies until the 1950s were manual removal of
the placenta and/or “vigorous” uterine curettage during a prior delivery. Today,
around 95% of women presenting with a PAS at delivery have had at least one prior
caesarean delivery and the most common presentation is a placenta previa with
accreta [3]. Moreover, there is strong evidence that the incidence of PAS increases
with the number of prior caesarean deliveries [5]. Similarly, the ratio of
adherent/invasive accreta placentas has changed from 70/30 in the 1970s to 50/50
in the last two decades [3], a change that can be linked to the increase in the number
of grand multiparas presenting with multiple caesarean scar(s).

Accreta placentation is now almost an entirely iatrogenic condition. Worse,
the increased incidence and severity make it a leading cause of peripartum
hysterectomy, maternal morbidity and even mortality. The development of FIGO
consensus guidelines on PAS disorders and a theme issue on this topic in a
specialist international journal are therefore very timely. Both the FIGO guidelines
and the peer-reviewed articles included in this special issue address various aspects
of the epidemiology, diagnosis and conservative and surgical managements of PAS
and should provide readers with a comprehensive overview of this complex disorder.
Recent progresses have been made in standardizing the clinical and ultrasound
diagnosis of PAS but there is still a need for authors to use an inclusive terminology
and to include detailed histopathologic data when possible. Within this context,
multi-centric prospective studies are essential to improve the perinatal management
of PAS disorders. We hope that this theme issue will promote such collaborations at
both the national and international level.

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Conflicts of interest
The authors are Guest Editors for the *International Journal of Gynecology &
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