The Journal of Maternal-Fetal & Neonatal Medicine

ISSN: 1476-7058 (Print) 1476-4954 (Online) Journal homepage: http://www.tandfonline.com/loi/ijmf20

# Diagnosis of placental abruption: a legal issue for physicians

Gabriele Saccone, Giuseppe Maria Maruotti, Mariano Paternoster & Pasquale Martinelli

**To cite this article:** Gabriele Saccone, Giuseppe Maria Maruotti, Mariano Paternoster & Pasquale Martinelli (2016) Diagnosis of placental abruption: a legal issue for physicians, The Journal of Maternal-Fetal & Neonatal Medicine, 29:24, 4035-4036, DOI: 10.3109/14767058.2016.1153061

**To link to this article:** http://dx.doi.org/10.3109/14767058.2016.1153061

Accepted author version posted online: 11 Feb 2016.
Published online: 08 Mar 2016.

THE JOURNAL OF MATERNAL-FETAL & NEONATAL MEDICINE

http://informahealthcare.com/jmf
ISSN: 1476-7058 (print), 1476-4954 (electronic)

J Matern Fetal Neonatal Med, 2016; 29(24): 4035–4036
 DOI: 10.3109/14767058.2016.1153061

Taylor & Francis
Taylor & Francis Group

LETTER TO THE EDITOR

# Diagnosis of placental abruption: a legal issue for physicians

Gabriele Saccone[1], Giuseppe Maria Maruotti[1], Mariano Paternoster[2], and Pasquale Martinelli[1]

[1]*Department of Neuroscience, Reproductive Sciences and Dentistry, School of Medicine, University of Naples Federico II, Naples, Italy and*
[2]*Department of Advanced Biomedical Sciences, School of Medicine, University of Naples Federico II, Naples, Italy*

## Introduction

Obstetrician–gynecologists are frequently exposed to malpractice claims. One of the most frequently seen type of medical malpractice involves cases of misdiagnosis, or the failure to promptly diagnose placental abruption. Nevertheless, despite heightened awareness, placental abruption still remains unpredictable and unpreventable. The diagnosis is usually made clinically and confirmed by gross or histologic examination of the placenta, however, it may be occult and may go undiagnosed until after delivery. Most cases of placental abruption occur before the onset of labor in low-risk pregnancies and are not predictable with regard to maternal reproductive risk factors. Current antepartum methods of detecting utero-placental problems, including Doppler ultrasonography, are not effective in prenatal prediction of placental abruption. Using clinical criteria and ultrasound evaluation the diagnosis is made prior to delivery in only 62% of cases so that >30% may go undiagnosed until examination of placenta after delivery.

Placenta abruption (also known as abruption placentae), defined as a premature separation of a normally implanted placenta, is one of the more serious problems that can occur during pregnancy, labor and delivery [1]. This is an obstetric emergency, with an overall prevalence rate of 1%, in which the placenta separates from the lining of the uterus, depriving the fetus of oxygen and nutrients, and potentially causing severe hemorrhage into the decidua basalis with higher risk of maternal and fetal morbidity and mortality [1,2].

Obstetrician–gynecologists are frequently exposed to malpractice claims [3,4]. Approximately 77% of the ob/gyns surveyed by the American College of Obstetricians and Gynecologists (ACOG) in 2012 said they had been named in a malpractice suit during their careers [5]. One of the most frequently seen type of medical malpractice involves cases of misdiagnosis, or the failure to promptly diagnose placental abruption, with a very high number of cases of placental abruption management errors and high average monetary settlement for each cases [5].

The diagnosis of placental abruption is clinical, while ultrasound scan and conventional electronic fetal heart monitoring (i.e. cardiotocography) are tools with limited use.

## Clinic

Placental abruption may be suspected in pregnant women with vaginal bleeding and/or abdominal pain, history of trauma, as well as in those who present with unexplained preterm delivery. About 10% of abruption presents with only occult bleeding. Occasionally the presenting sign is fetal death [6]. The presence of risk factors, including prior placental abruption, hypertensive disorders, smoking, cocaine, multiple gestation, elevated maternal serum alpha-fetoprotein (MS-AFP), subchorionic hematoma, prior cesarean section, is highly suspicious for placental abruption [7]. However, nearly 50% of women with placental abruption have no identifiable risk factors [7].

## Ultrasound examination

An ultrasound examination is useful primarily in the exclusion of placenta previa o vasa previa. The accuracy of ultrasound in the diagnosis of placental abruption is <30% [8]. So while ultrasound is very helpful in ruling out other causes of vaginal bleeding, it lacks the sensitivity needed to reliably detect placental abruption [8]. However, a positive finding is associated with more aggressive management and worse neonatal outcome [8]. In addition, the Doppler ultrasonography is not effective in prenatal prediction of placental abruption [7].

## Cardiotocography

It is known that a variety of non-reassuring fetal heart rate patterns, including late decelerations and bradycardia, occur with placental abruption and nonlinear dynamic indices are qualitatively different from normal pregnancy but conventional fetal heart rate parameters are no significantly different and the overall detection rate of cardiotocography in the diagnosis of placental abruption is very low [9].

Address for correspondence: Pasquale Martinelli, MD, Department of Neuroscience, Reproductive Sciences and Dentistry, School of Medicine, University of Naples Federico II, Naples, Italy. E-mail: martinel@unina.it

In summary, despite heightened awareness, placental abruption remains unpredictable and unpreventable. The diagnosis is usually made clinically and confirmed by gross or histologic examination of the placenta, however, it may be occult and may go undiagnosed until after delivery [1]. Most cases of placental abruption occur before the onset of labor in low-risk pregnancies and are not predictable with regard to maternal reproductive risk factors. Current antepartum methods of detecting utero-placental problems, including Doppler ultrasonography, are not effective in prenatal prediction of placental abruption. Using clinical criteria and ultrasound evaluation the diagnosis is made prior to delivery in only 62% of cases so that >30% may go undiagnosed until examination of placenta after delivery [1]. This raises the question of malpractice claims for failure to promptly diagnose placental abruption [5].

In a malpractice claim, the patient is always the loser, the lawyer the winner and the physician often devastated by the patient's ingratitude. To keep a successful lawsuit for a medical error four key elements must be proved: duty, breach of duty, causation and damages. Since this may be difficult to do, the lawyers have subtly brought in a new approach, the maloccurrence. The maloccurence is defined as a bad outcome unrelated to the quality of care provided. In this case, the lawyers need not prove the four key elements to win a malpractice lawsuit. For example, several maloccurence case for misdiagnosis of placental abruption, were wined in the last few years. Women, and maybe also the judges, should understand that physicians cannot predict the future, and that many diagnoses, such as the diagnosis of placental abruption, which is discussed above, could be difficult, if not impossible. How one is to avoid legal issues in placental abruption cases is still subject of debate [3,5]. The medical malpractice and maloccurrence crisis could soon be translated into a health delivery service crisis.

## Declaration of interest

The authors report no conflict of interest. No financial support was received for this study.

## References

1. Ananth CV, Lavery JA, Vintzileos AM, et al. Severe placental abruption: clinical definition and associations with maternal complications. Am J Obstet Gynecol 2016;214:272.e1–9.
2. Salihu HM, Bekan B, Aliyu MH, et al. Perinatal mortality associated with abruption placenta in singletons and multiples. Am J Obstet Gynecol 2005;193:198–203.
3. Barber HR. The malpractice crisis in obstetrics and gynecology: is there a solution? Bull N Y Acad Med 1991;67:162–72.
4. Enbom JA. Should medical malpractice prevention be considered separately or as an integral part of comprehensive health care safety improvement? Am J Obstet Gynecol 2013;208:495–8.
5. American College of Obstetricians and Gynecologists. Survey results, 2012. Available from: https://www.acog.org/~/media/Departments/Professional%20Liability/2012PLSurveyNational.pdf [last accessed 27 Nov 2015].
6. Tikkanen M, Nuutila M, Hiilesmaa V, et al. Clinical presentation and risk factors of placental abruption. Acta Obstet Gynecol Scand 2006;85:700–5.
7. Toivonen S, Heinonen S, Anttila M. Reproductive risk factors, Doppler findings, and outcome of affected births in placental abruption: a population-based analysis. Am J Perinatol 2002;19:451–60.
8. Glantz C, Purnell L. Clinical utility of sonography in the diagnosis and treatment of placental abruption. J Ultrasound Med Med 2002;21:837–40.
9. Choi WY, Hoh JK. Nonlinear analysis of fetal heart rate dynamics in fetuses compromised by asymptomatic partial placental abruption. Placenta 2015;36:1474–9.