TÜRK JİNEKOLOJİ VE OBSTETRİK DERNEĞİ
İSTANBUL ANADOLU ŞUBESİ

Plasental İnvazyon Anomalilerinde yönetim

Çetin KILIÇÇI
SBÜ ZEYNEP KAMİL KADIN VE ÇOCUK HASTALIKLARI

EĞİTİM ARAŞTIRMA HASTANESİ

Plasentanın myometriuma değişik derecelerde anormal olarak yapışması

- **Akreta %79**

  Koryonik villuslar (desidua basalisin içinde sınırlı kalmaktan çok) myometriyuma yapışmıştır

- **İnkreta %14**

  Koryonik villuslar myometriyumun içine invaze olmuştur

- **Perkreta %7**

  Koryonik villuslar myometriyumun dışına doğru, serozaya kadar penetre olmuştur.

(Anath CV 1997)

SIKLIK

50 yıl önce de nadir bir durumdu, günümüzde daha sık görülmektedir

- 1950'lerde.....**30.000** doğumda 1 (Read JA 1980, Miller DA 1997)
- 1980 lerde..... **2.510** doğumda 1 (Read JA 1980, Miller DA 1997)
- 1982-2002..... **533** doğumda 1 (Wu S 2005)

- Artışın asıl nedeni: SEZARYEN SAYISI ARTIŞI
- 2000 yılından sonra artış C/S artış oranından fazla (Higgins MF, 2013)

Önemi

- Maternal mortalite ve morbidite nin en önemli nedenidir.
- % 7 mortaliteden sorumlu.
- Peripartum kanama ve plasentanın doğurtulması sırasında aşırı kanama riski var.
- Histerektomi sıklıkla gerekir.
- Mesane ,üreter ve barsak yaralanma riski var.
- Yoğun bakım gereksinimi artar.

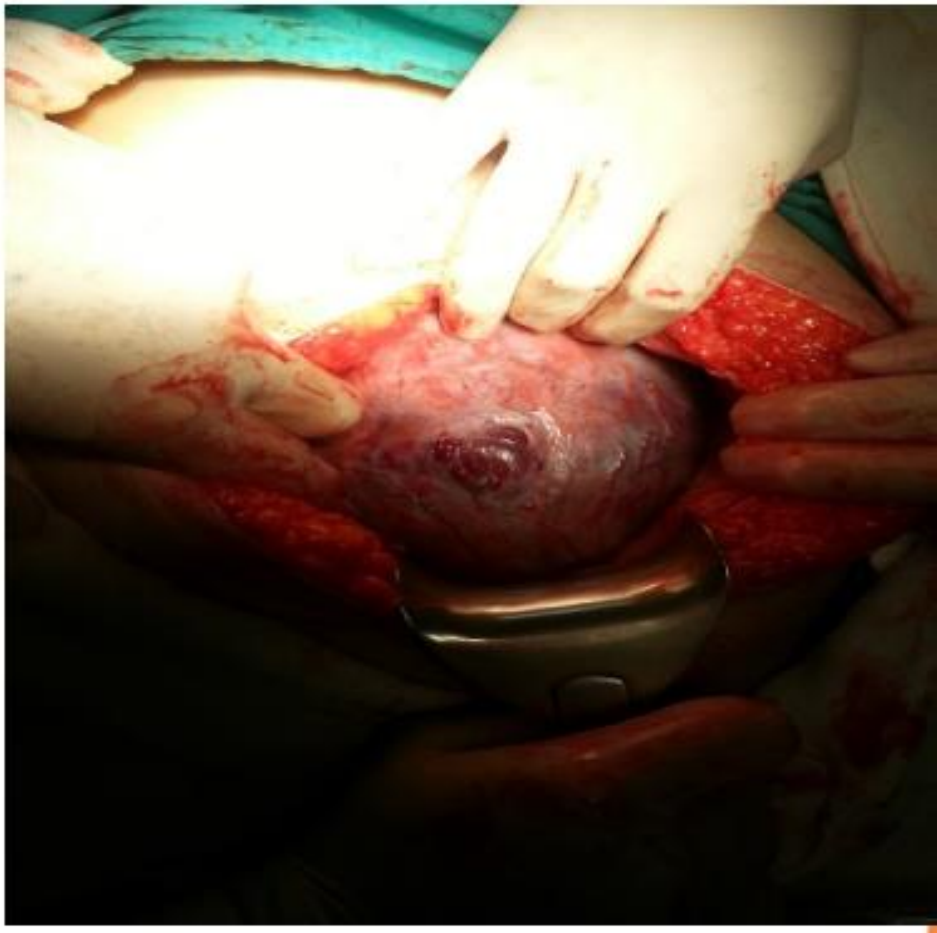
Etyoloji -Patogenez

Kesin olarak bilinmemektedir. Teoriler var

- Defektif desidualizasyon (en yaygın teori)
- Aşırı ekstravillöz trafoblastik invazyon
- Histerotomi skarında defektif vasküler remodelling
- Ayrıca invazyon derinliğini belirleyen faktörlerde bilinmemektedir.

Risk Faktörleri

- **Plasenta Previa (OR=54)**
- **Geçirilmiş uterin cerrahi**
- Maternal yaş
- Multiparite
- Uterin küretaj
- Uterin radyasyon
- Endometrial ablasyon
- Asherman sendromu
- Myom
- Uterin anomaliler
- Sigara
- IVF gebelikler
- Hipertansif hastalıklar



Risk faktörleri

Table 2. Link between number of previous caesarean sections and risk of placenta accreta, placenta praevia and hysterectomy[127]

Number of previous caesarean section(s)	Number of women	Number of women with placenta accreta	Chance of placenta accreta if placenta praevia	Number of hysterectomies
0	6201	15 (0.24%)	3%	40 (0.65%)
1	15 808	49 (0.31%)	11%	67 (0.42%)
2	6324	36 (0.57%)	40%	57 (0.9%)
3	1452	31 (2.13%)	61%	35 (2.4%)
4	258	6 (2.33%)	67%	9 (3.49%)
5	89	6 (6.74%)	67%	8 (8.99%)

Royal College of Obstetricians and Gynaecologists

Tanı -

- Tanı genellikle II. veya III.trimesterde usg ile konur.
- I. Trimesterde yerleşmiş objektif bir kriter yok

  Alt uterin segmente yerleşmiş gebelik kesesi

  Plasental yatakta erken düzensiz lakuna varlığı

  Ssg

Cesarean scar pregnancy is a precursor of morbidly adherent placenta

Timor-Tritsch I.E.,[1] Monteagudo A.,[1] Cali G.,[2] Vintzileos A.,[3] Viscarello R.,[4] Al-Khan A.,[5] Zamudio S.,[5] Mayberry P.,[4] Cordoba MM,[1] Dar P.[6]

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Keywords: Cesarean scar pregnancy, morbidly adherent placenta, CSP, MAP, cesarean pregnancy

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ULTRASOUND
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Cesarean scar pregnancy and early placenta accreta share common histology

I. E. Timor-Tritsch

- 29 **SSG ve Erken Plasenta Akreta** (EPA) histolojisi incelenmiş
- **Histopatolojik bulgular aynı**
- **Aynı hastalığın (III trim PA)..... farklı evreleri** olabilir

Am J Obstet Gynecol. 2017 May;216(5):510.e1-510.e6. doi: 10.1016/j.ajog.2017.01.019. Epub 2017 Jan 20.

The clinical outcome of cesarean scar pregnancies implanted "on the scar" versus "in the niche".

Kaelin Agten A[1], Cali G[2], Monteagudo A[3], Oviedo J[4], Ramos J[4], Timor-Tritsch I[4].

Author information

Abstract

BACKGROUND: The term cesarean scar pregnancy refers to placental implantation within the scar of a previous cesarean delivery. The rising numbers of cesarean deliveries in the last decades have led to an increased incidence of cesarean scar pregnancy. Complications of cesarean scar pregnancy include morbidly adherent placenta, uterine rupture, severe hemorrhage, and preterm labor. It is suspected that cesarean scar pregnancies that are implanted within a dehiscent scar ("niche") behave differently compared with those implanted on top of a well-healed scar. To date there are no studies that have compared pregnancy outcomes between cesarean scar pregnancies implanted either "on the scar" or "in the niche."

OBJECTIVES: The purpose of this study was to determine the pregnancy outcome of cesarean scar pregnancy implanted either "on the scar" or "in the niche."

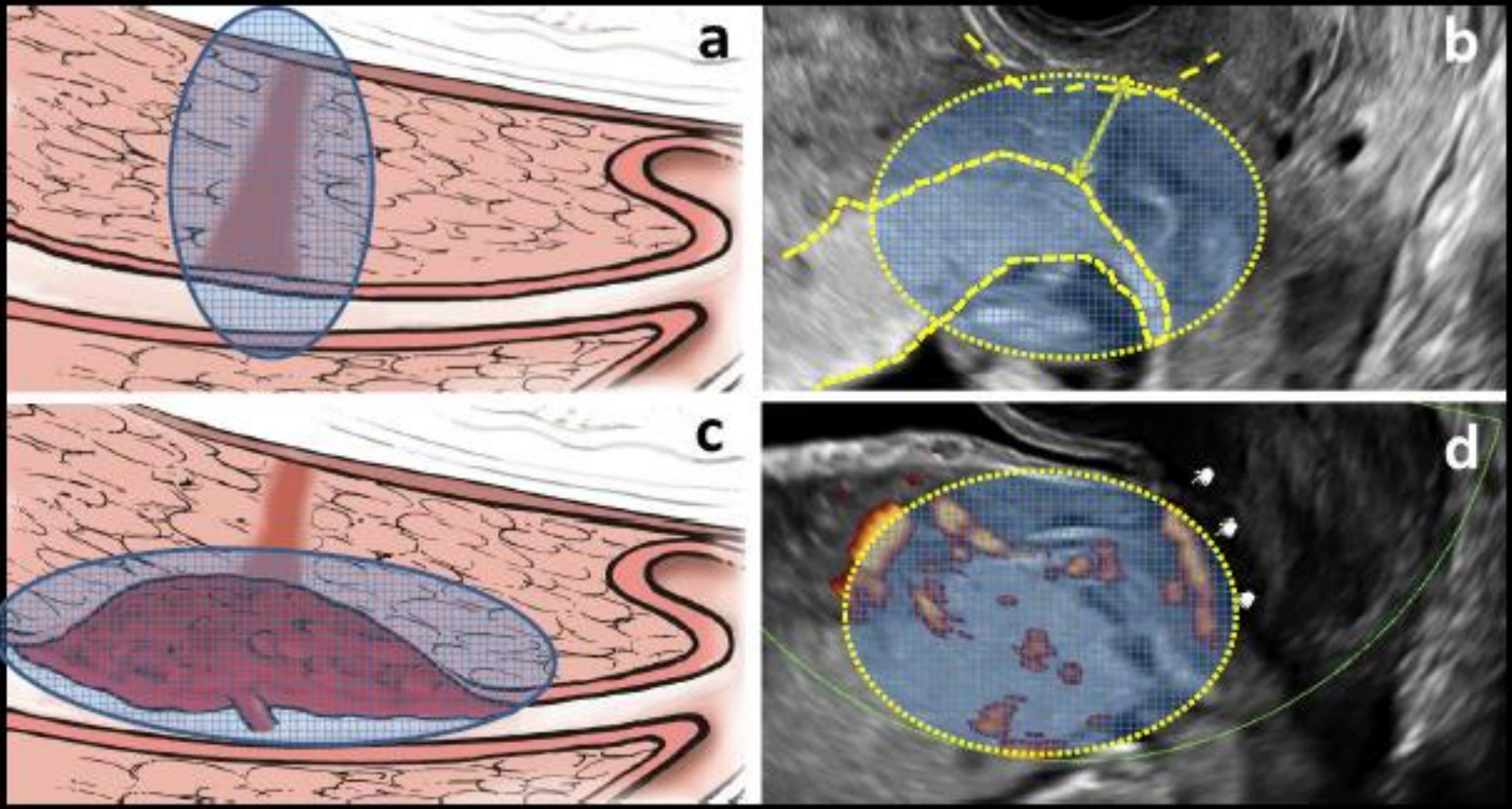
STUDY DESIGN: This was a retrospective 2-center study of 17 patients with cesarean scar pregnancy that was diagnosed from 5-9 weeks gestation (median, 8 weeks). All cesarean scar pregnancies were categorized as either implanted or "on the scar" (group A) or "in the niche" (group B), based on their first-trimester transvaginal ultrasound examination. Clinical outcomes based on gestational age at delivery, mode of delivery, blood loss at delivery, neonate weight and placental histopathologic condition were compared between the groups with the use of the Mann-Whitney U test. Myometrial thickness overlying the placenta was compared among all the patients who required hysterectomy and those who did not with the use of the Mann-Whitney U test. Myometrial thickness was also correlated with gestational age at delivery with the use of Spearman's correlation.

RESULTS: Group A consisted of 6 patients; group B consisted of 11 patients. Gestational age at delivery was lower in group B (median, 34 weeks; range, 20-36 weeks) than in group A (median, 38 weeks; range, 37-39 weeks; P=.001). In group A, 5 patients were delivered via cesarean delivery (with normal placenta), and 1 patient underwent a cesarean-hysterectomy for placenta accreta. In group B, 10 patients had a cesarean-hysterectomy for placenta increta/percreta, and 1 patient underwent gravid-hysterectomy for vaginal bleeding at 20 weeks gestation. Blood loss was increased, but not significantly higher in group B (median, 1200 mL; range, 600-4000 mL) than in group A (median, 700 mL; range, 600-1400 mL; P=.117). Myometrium was statistically significantly thinner in the patients group that require hysterectomy (median, 1 mm; range, 0-2 mm) than in the group that did not (median, 5 mm; range, 4-9 mm; P=.001). Myometrial thickness showed a positive correlation with the gestational age (r=0.820; P<.0005).

CONCLUSION: Patients with cesarean scar pregnancy implanted "on the scar" had a substantially better outcome compared with patients in whom the cesarean scar pregnancy implanted "in the niche." Myometrial thickness <2 mm in the first-trimester ultrasound examination is associated with morbidly adherent placenta at delivery.

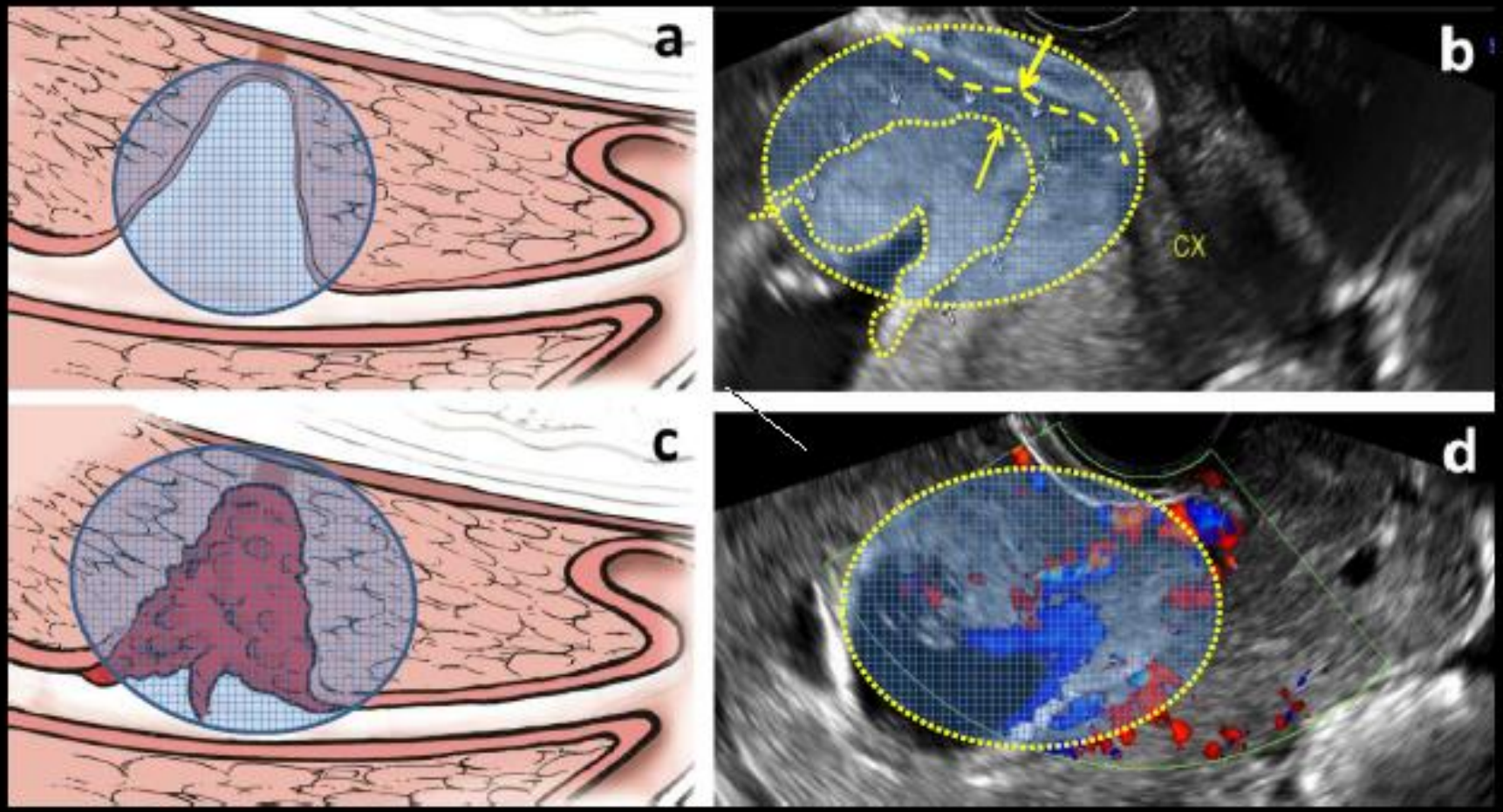
Results	Group A On the scar	Group B In the niche	P value
n	6	11	
GA at diagnosis (weeks)	8	7	0.679
GA at delivery (weeks)	38	34	0.001
Cesarean delivery	6	10	
Cesarean hysterectomy	1 for focal placenta Accreta	10 for adherent placenta + 1 gravid hysterectomy at 20 weeks for bleeding	
Blood loss (ml)	700 (300-4000)	1200 (270-2850)	0.117
Neonatal weight (g)	3220 (2900-3570)	2450 (270-2850)	0.001
Myometrial thickness (mm)	5 (range 4-9)	1 (range 0-2)	0.001

Cesarean scar pregnancy implanted "on the scar"



KAELIN AGTEN A., CALI G., MONTEAGUDO A., OVIEDO J. TIMOR-TITSCH I.E. The clinical outcome of cesarean scar pregnancies implanted "on the scar" versus "in the niche. AJOG 2017

Cesarean scar pregnancies implanted "in the niche"



KAELIN AGTEN A., CALI G., MONTEAGUDO A., OVIEDO J. TIMOR-TITSCH I.E. The clinical outcome of cesarean scar pregnancies implanted "on the scar" versus "in the niche. AJOG 2017

2.Ve 3.Trimesterde Tanı

- Retroplasental hipoekoik zon kaybı
- Plasentada multipl vasküler lakün
- Retroplasental miyometrial kalınlık < 1 mm
- Uterin seroza - mesane duvarı ara yüzümü gösteren beyaz çizginin kaybı (mesane invazyonu) ve vaskülaritede artış

2.Ve 3.trimesterde tanı

	Sensitivite	Spesifisite	PPV	NPV
Hipoekoik zon yokluğu	73-100	35-80	14-57	96-100
Düzensiz mesane sınırları	11-70	99-100	75-100	88-92
Plasental lakuna	73-100	28-86	21-94	88-100
Myometrial kalınlık< 1	22-100	72-100	72-100	89-100

Tanı

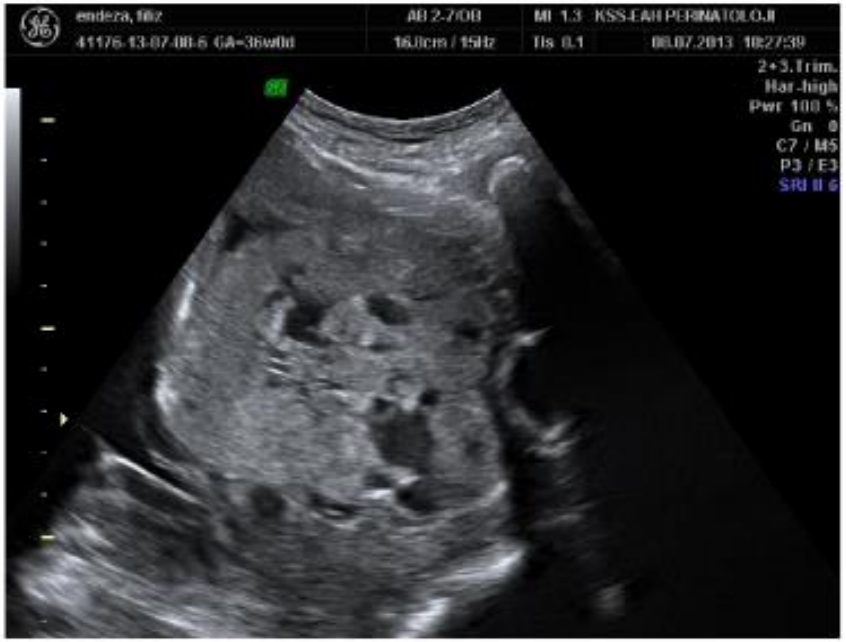
Table 1. Diagnostic performance of different ultrasound modalities

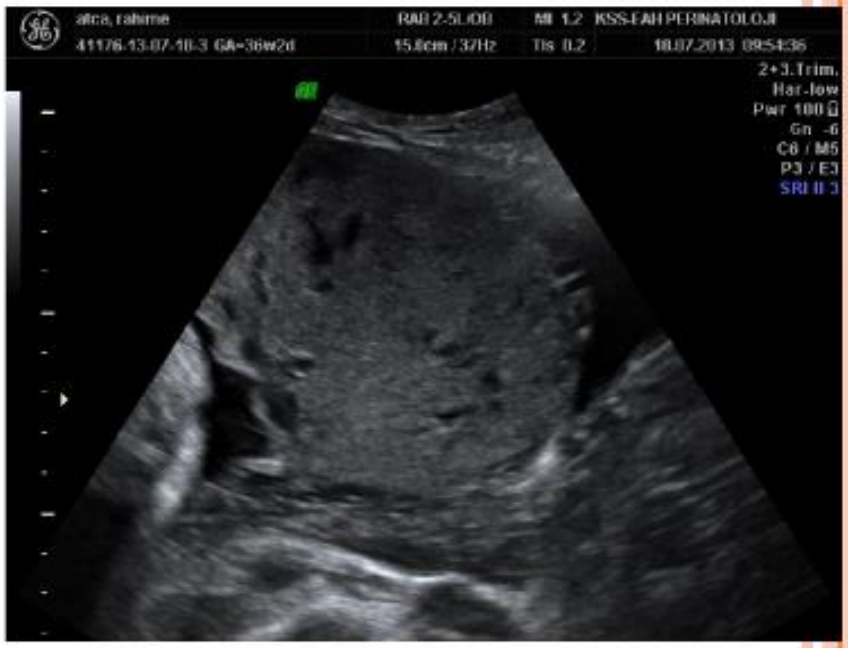
	Sensitivity (%)	Specificity (%)	Positive predictive value (%)	Risk
Greyscale	95	76	82	93
Colour Doppler	92	68	76	89
Three-dimensional power Doppler	100	85	88	100

Royal College of Obstetricians and Gynaecologists

Green-top Guideline No. 27

January 2011


endeza, filiz
41176-13-07-08-6 GA=36w0d
AB 2-7/OB
16.0cm / 15Hz
MI 1.3
Tis 0.1
KSS-EAH PERINATOLOJI
08.07.2013 10:27:39
2+3.Trim.
Har-high
Pwr 100 %
Gn 0
C7 / M5
P3 / E3
SRI II 6


atca, rahime
41176-13-07-10-3 GA=36w2d
RAB 2-5L/OB
15.8cm / 37Hz
MI 1.2
Tis 0.2
KSS-EAH PERINATOLOJI
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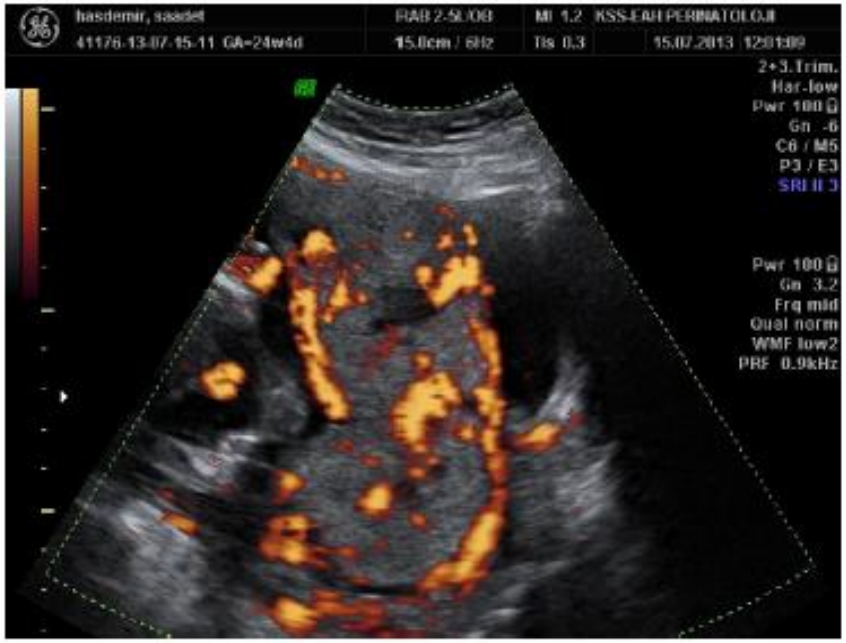
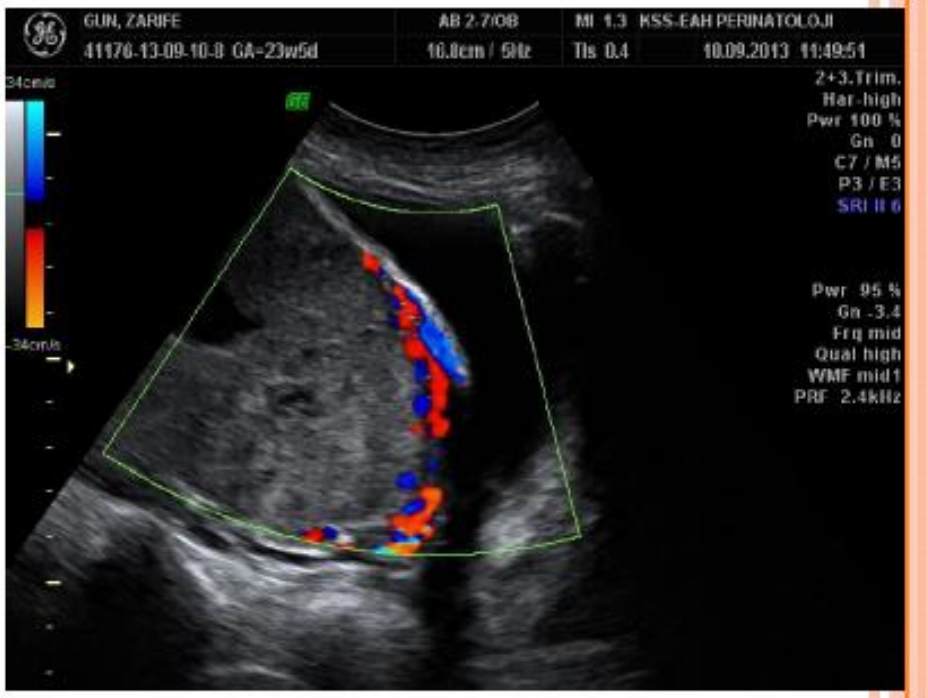
2+3.Trim.
Har-low
Pwr 100
Gn -6
C6 / M5
P3 / E3
SRI II 3


hasdemir, saadet
41176-13-07-15-11 GA=24w4d
RAB 2-5L/OB
15.0cm / 6Hz
MI 1.2
Tis 0.3
KSS-EAH PERINATOLOJI
15.07.2013 12:01:09
2+3.Trim.
Har-low
Pwr 100
Gn -6
C6 / M5
P3 / E3
SRI II 3
Pwr 100
Gn 3.2
Frq mid
Qual norm
WMF low2
PRF 0.9kHz


GUN, ZARIFE
41176-13-09-10-8 GA=23w5d
AB 2-7/OB
10.8cm / 5Hz
MI 1.3
Tis 0.4
KSS-EAH PERINATOLOJI
10.09.2013 11:49:51
34cm/s
-34cm/s
2+3.Trim.
Har-high
Pwr 100 %
Gn 0
C7 / M5
P3 / E3
SRI II 6
Pwr 95 %
Gn -3.4
Frq mid
Qual high
WMF mid1
PRF 2.4kHz

Yönetim

- Plasenta akreta tanısı konulan veya şüphesi olan hastalar

  Deneyimli cerahi ekip ,ürolog,genel cerah olmalı

  Uygun cerahi donanımın olduğu

  Kan bankasının olduğu

  YBÜ olduğu tersiyer merkeze yönlendirilmelidir.

Yönetim

- Prenatal tanı operasyona bağlı komplikasyonları azaltıyor ve transfüzyon gereksinimi düşürüyor.

AOGS
ACTA Obstetricia et Gynecologica Scandinavica

AOGS MAIN RESEARCH ARTICLE

Prenatal diagnosis of abnormally invasive placenta reduces maternal peripartum hemorrhage and morbidity

FRÉDÉRIC CHANTRAINE[1,2], THORSTEN BRAUN[3,4], MARKUS GONSER[5], WOLFGANG HENRICH[6] & BORIS TUTSCHEK[6,7]

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Objective. Abnormally invasive placenta (AIP) poses diagnostic and therapeutic challenges. We analyzed clinical cases with confirmed placenta increta or percreta. *Design.* Retrospective case series. *Setting.* Multicenter study. *Population.* Pregnant women with AIP. *Methods.* Chart review. *Main outcome measures.* Prenatal detection rates, treatment choices, morbidity, mortality and short-term outcome. *Results.* Sixty-six cases were analyzed. All women and all but three fetuses survived; 57/64 women (89%) had previous uterine surgery. In 26 women (39%) the diagnosis was not known before delivery (Group 1), in the remaining 40 (61%) diagnosis had been made between 14 and 37 weeks of gestation (Group 2). Placenta previa was present in 36 women (54%). In

Key Message

Unknown abnormally invasive placenta led to significantly more emergency hysterectomies and mass transfusions during or immediately after delivery. Prenatal diagnosis of abnormally invasive placenta reduces morbidity.

Antenatal tanının önemi

	Antenatal tanı var	Antenatal tanı yok	p
Hasta sayısı	5	10	
Komplikasyon	0	8	**0.12**
Kan kaybı (ml)	1140	3080	**<0.01**

Merz W. et al., Ultraschall Med, 2009

P.Akreta

- Gestasyonel hafta artıkça kanama riski artar
- Plasenta previa 37 haftadan önce %90 semptomatik kanama,
- Preterm doğum yaklaşık 34 haftada planla

NIH Public Access
Author Manuscript
Obstet Gynecol. Author manuscript; available in PMC 2012 August 1.

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Obstet Gynecol. 2011 August ; 118(2 Pt 1): 323–333. doi:10.1097/AOG.0b013e3182255999.

Timing of Indicated Late-Preterm and Early-Term Birth

Catherine Y Spong[1], Brian M Mercer[2], Mary D'Alton[3], Sarah Kilpatrick[4], Sean Blackwell[5], and George Saade[6]

230 plasenta previa olgusu kanama riski

- 35 gebelik haftasına %4.7
- 36 gebelik haftası %15
- 37 gebelik haftası %30
- 38 gebelik haftası %59
- Komplike olmamış plasenta previa'da 36-37 gebelik haftasında gebelik sonlandırılabilir

CERRAHİ SEÇENEKLER

1. Sezaryen histerektomi
2. Konservatif tedavi
   - **Plasentanın yerinde bırakılması**
   - **Plasenta ile birlikte invaze myometrium çıkarılması**
   - **Plasentanın çıkarılıp, sütur ve balon tamponad ile kanama kontrolü**

- İyi seçilmiş olgularda konservatif kalınabilir (Garmi, G 2012)

Cerrahi tedavide uygulanacak tedavi yöntemi her hastaya göre kişiselleştirilmeli

(Committee on Obstetric practice 2012)

CERRAHİ

- Dorsal litotomi pozisyonu
- Göbek altı-üstü median/paramedian insizyon, Pfannenstiel ?
- Uterus insizyonu (Fundal vertikal-transvers)
- Plasenta elle çıkartılmaya çalışılmaz
- Plasenta ayrılmazsa kordon bağlanır, uterus kapatılarak histerektomiye başlanır.

HİSTEREKTOMİ

- Plasentayı örten uterus serozasının delinmesinden kaçınmalı
- Mesane tutulumunda sistotomiye gerek duyulabilir
- Mesanenin etkilenen kısmı çıkarılabilir (uterusa çıkarılamayacak kadar yapışık ise)
- Bazı hastalarda **subtotal histerektominin** başarılı
- Alt uterin segment/servikal plasental implantasyondan kaynaklı persistan kanamalarda total histerektomi gerekir

PERİPARTUM HİSTEREKTOMİNİN KOMPLİKASYONLARI

- Perioperatif mortalite (%1-6)
- Masif kan kaybı (ort. 5 L): DIK, Sheehan S, pulmoner ödem, ARDS
- Mesane yaralanması (%6-29)
- Üreter yaralanması (%7)
- Febril komplikasyonlar
- Barsak disfonksiyonu
- Re-operasyon

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https://doi.org/10.1080/14767058.2017.1359535

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ORIGINAL ARTICLE

Planned cesarean hysterectomy versus modified form of segmental resection in patients with placenta percreta

Cetin Kilicci, Enis Ozkaya, Ahmet Eser, Evrim Ergen Bostanci, Ilhan Sanverdi, Cigdem Abide Yayla, Elif Tozkir and Semra Kayatas Eser

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ABSTRACT

Objectives: The aim of this study was to compare some clinical characteristics of two different management alternatives in pregnants with placental invasion anomalies.

Methods: We conducted a single-center retrospective study of all patients who delivered with invasive placentation between January 2016 and May 2017. We included only the patients with placental invasion anomaly and planned cesarean section.

Results: Fifty-one pregnants met the inclusion criteria. Cesarean hysterectomy was performed in 29 patients and segmental resection in 22. Major intraoperative and postoperative complications were comparable between the two groups. There were significant differences between the groups with regard to gravidity, pre- and post-operative hemoglobin concentrations, number of packed red blood cell transfused, and operation time ($p < .05$).

Conclusions: An initial fertility conserving surgical procedure is an option in patients with extensive invasive placentation with lesser transfusion requirement and shorter operative time compared to cesarean hysterectomy.

ARTICLE HISTORY
Received 26 June 2017
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KEYWORDS
Placenta percreta conservative management; uterus preserving surgery; segmental resection; abnormal placentation

Table 3. Comparison of conservative and cesarean hysterectomy approaches in terms of some demographic and clinical characteristics.

	Segmental resection ($n=22$)	Cesarean hysterectomy ($n=29$)	p value (MWU)
Age (years)	32.3 + 5.3	32.45 + 4.7	NS
Gravidity	3.1 + 1.2	3.8 + 1.3	<.05
Parity	1.9 + 1.1	2.3 + 0.9	NS
Miscarriage	0.3 + 0.6	0.7 + 1.1	NS
# of previous CS	1.6 + 0.9	1.8 + 0.6	NS
Gestational age at delivery (weeks)	35.3 + 1.6	35.4 + 2.3	NS
Fetal birth weight (g)	2788.1 + 504.1	2670.7 + 678.9	NS
Preop-Hb (g/dl)	11.7 + 0.7	10.1 + 0.8	<.05
Preop-Hct (%)	34.5 + 3.2	33.1 + 2.7	<.05
Postop-Hb (g/dl)	9.1 + 1.1	8.2 + 0.9	<.05
Postop-Hct (%)	26.5 + 3.1	24.4 + 3.1	<.05
# packed red blood cell transfusion	1.1 + 1.1	2.2 + 1.6	<.05
# fresh frozen plasm	0.6 + 0.9	2.2 + 2.1	<.05
Operation time (min)	76.9 + 19.5	112.5 + 33.8	<.05
Duration of hospital stay (days)	2.8 + 1.2	3.3 + 1.4	NS

CS: cesarean section; Preop: Preoperative; Postop: Postoperative; Hb: Hemoglobin; Hct: Hematocrit.