
**Author(s):** Fan, Dazhi; Xia, Qing; Liu, Li; Wu, Shuzhen; Tian, Guo; Wang, Wen; Wu, Song; Guo, Xiaoling; Liu, Zhengping

**Source:** PloS one; 2017; vol. 12 (no. 1); p. e0170194

**Publication Date:** 2017

**Publication Type(s):** Meta-analysis Journal Article Review

**PubMedID:** 28107460

Available at [PLoS ONE](https://doi.org/10.1371/journal.pone.0170194) - from Europe PubMed Central - Open Access

Available at [PLoS ONE](https://doi.org/10.1371/journal.pone.0170194) - from PubMed Central

**Abstract:** BACKGROUND The global burden of postpartum hemorrhage (PPH) in women with placenta previa is a major public health concern. Although there are different reports on the incidence of PPH in different countries, to date, no research has reviewed them. OBJECTIVE The aim of this study was to calculate the average point incidence of PPH in women with placenta previa. METHODS A systematic review and meta-analysis of observational studies estimating PPH in women with placenta previa was conducted through literature searches in four databases in Jul 2016. This study was totally conducted according to the MOOSE guidelines and in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses standard. RESULTS From 1148 obtained studies, 11 included in the meta-analysis, which involved 5146 unique pregnant women with placenta previa. The overall pooled incidence of PPH was 22.3% (95% CI 15.8-28.7%). In the subgroup, the prevalence was 27.4% in placenta previas, and was 14.5% in low-lying placenta previa; the highest prevalence was estimated in Northern America (26.3%, 95%CI 11.0-41.6%), followed by the Asia (20.7%, 95%CI 12.8-28.6%), Australia (19.2%, 95% CI 17.2-21.1%) and Europe (17.8%, 95% CI, 11.5%-24.0%). CONCLUSIONS The summary estimate of the incidence of PPH among women with placenta previa was considerable in this systematic review. The results will be crucial in prevention, treatment, and identification of PPH among pregnant women with placenta previa and will be contributed to the planning and implantation of relevant public health strategies.

**Database:** Medline
2. Planned vaginal delivery versus planned cesarean delivery in cases of low-lying placenta

**Author(s):** Taka A.; Sato Y.; Sakae C.; Satake Y.; Emoto I.; Maruyama S.; Mise H.; Kim T.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Mar 2017; vol. 30 (no. 5); p. 618-622

**Publication Date:** Mar 2017

**Publication Type(s):** Article

**PubMedID:** 27180627

**Abstract:** Objective: To assess the applicability of trial of labor in cases of low-lying placenta.

Methods: In this observational cohort study, we collected data from the women with low-lying placenta delivered at our hospital between April 2012 and December 2015. Low-lying placenta was diagnosed when the length from the placental lowest edge to the internal cervical os (placenta-os distance) was 0-20 mm at 36 gestational weeks. Planned mode of delivery for each case was determined by patient's preference. Maternal and neonatal outcomes were compared between the planned vaginal delivery group (N = 11) and the planned cesarean delivery group (N = 7). Results: All the women in the planned cesarean delivery group underwent scheduled cesarean section at 37-38 gestational weeks. Three cases in the planned vaginal delivery group required emergency cesarean section for uncontrollable antepartum bleeding. The intrapartum blood loss was significantly smaller in the planned vaginal delivery group than in the planned cesarean delivery group (946 +/- 204 g vs. 1649 +/- 256 g, p = 0.047). Umbilical arterial blood pH was similar between the two groups. All the women requiring emergency cesarean section were accompanied by marginal sinus. Conclusions: Trial of labor can be offered to all the women with low-lying placenta except for those accompanied by marginal sinus.

Copyright © 2015 Informa UK Limited, trading as Taylor & Francis Group.

**Database:** EMBASE
3. Bleeding complications in pregnancies with low-lying placenta.

**Author(s):** Wortman, Alison C; Twickler, Diane M; McIntire, Donald D; Dashe, Jodi S

**Source:** The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; 2016; vol. 29 (no. 9); p. 1367-1371

**Publication Date:** 2016

**Publication Type(s):** Journal Article

**PubMedID:** 26043292

**Abstract:** TO evaluate pregnancy outcomes with low-lying placenta according to the distance from placenta to cervical os.

**METHODS** Retrospective cohort study of singleton pregnancies with low-lying placenta (placenta edge within 20 mm of internal os on transvaginal sonography) delivered at our hospital from 2002 to 2012, excluding suspected placenta accreta and vasa previa. Vaginal delivery was offered in the absence of another indication for cesarean. Outcomes were stratified according to placenta-os distance ≤10 mm and 11-20 mm.

**RESULTS** Of 98 pregnancies with low-lying placenta, 41% had placenta-os distance ≤10 mm and 59% placenta-os distance 11-20 mm. Fifty-four percent had a trial of labor. Six (15%) with placenta-os ≤10 mm and 21 (36%) with placenta-os 11-20 mm delivered vaginally, p = 0.02. Bleeding necessitating cesarean occurred in 25%, and postpartum hemorrhage in 43%; neither complication associated with placenta-os distance. Third-trimester bleeding prior to delivery hospitalization was reported in 44% and associated with later bleeding requiring cesarean in 51% versus 4% of those without third-trimester bleeding, p < 0.001.

**CONCLUSION** Whereas low-lying placenta does not contraindicate labor, we found significant risk for bleeding complications, regardless of the planned mode of delivery. Placenta-os distance did not significantly affect outcomes in our series.

**Database:** Medline
4. Vaginal delivery in women with placental previa partial is or low lying placenta

Author(s): Lee S.J.; Jeon S.B.; Lee M.S.; Lim G.

Source: Journal of Perinatal Medicine; Oct 2015; vol. 43

Publication Date: Oct 2015

Publication Type(s): Conference Abstract

Abstract: Objectives To evaluate safety of trial of labour in women with placenta previa partialis or low lying placenta. Methods We conducted retrospective study involving the women of placenta previa (including placental previa totalis, partialis, low lying placenta) who delivered baby between 2008 and 2014 at our centre. We reviewed their clinical characteristics and delivery outcome. Results One hundred seventy five women were collected. Among these women, 103 women with placental previa totalis and 18 women with weak low lying placenta (the distance of placental edge - internal os of cx is over 2 cm) were excluded. Of 16 women with placental previa partialis, 5 women labored and 3/5 women delivered baby vaginally (success rate: 60 %). Of 38 women with low lying placenta, 22 women labored and 17/22 women were successful for vaginal delivery (success rate: 77 %). There were 2 cases of intrapartum bleeding that require emergent caesarean delivery in labor-tried low lying placenta group (2/22). Conclusions The women with placenta previa partialis or low lying placental could try to labor and deliver safely.

Database: EMBASE
OBJECTIVE: Our goal was to determine if a marginal previa at 18-22 wga requires follow-up evaluation. To this end, we examined if marginal previas a) routinely resolve before delivery (i.e., are no longer marginal or low lying) and b) if diagnosis is associated with increased risk of adverse outcomes such as ante- or peripartum hemorrhage.

STUDY DESIGN: A retrospective cohort study was conducted at a tertiary center from 1/2008 to 12/2013. Marginal previa cases at 18-22 wga were identified using our ultrasound database. Placental location was confirmed by a board certified MFM. Multiple gestations were excluded. Data regarding ante- and peripartum course were abstracted including but not limited to gestational age at time of diagnosis, time of resolution, hemorrhage, delivery method and other complications. Excel statistical software was used for data analysis.

RESULTS: 59 cases were initially identified, of which 53 had ultrasound data available. 41/53(77%) had complete resolution before delivery. 12(23%) resolved but remained low-lying at 28 wga; 3(6%) remained low-lying at delivery. Delivery information was available on 44/53 cases. 10(23%) delivered via cesarean at an average 38 3/7 wga (35 4/7-41 1/7) with average blood loss of 606mL (500ml-2000ml). 34(77%) delivered vaginally at an average 39 1/7 wga (35 5/7-41 4/7) with average blood loss of 200mL (200mL-2600mL). 3 cases in both the cesarean (30%) and vaginal (9%) delivery groups had postpartum hemorrhage. Of the 3 cases that remained low-lying at the time of delivery, 2 had delivery data available. The average gestational age at time of delivery was 35 6/7 weeks (35 6/7-36 0/7) with average blood loss of 1500mL (1000mL-2000mL). Ante- and peripartum bleeding complicated both cases.

CONCLUSION: Of 53 marginal previa cases diagnosed at 18-22 wga 3(6%) remained low-lying. With the increased risk of hemorrhage associated with low-lying placentas, this suggests that women diagnosed with marginal previa at 18-22 wga should have repeat transvaginal ultrasound done before delivery.
6. Role of midtrimester localization of the placenta in predicting pregnancy outcome

Author(s): Faizi S.; Pai M.V.

Source: International Journal of Infertility and Fetal Medicine; 2014; vol. 5 (no. 3); p. 87-91

Publication Date: 2014

Publication Type(s): Article

Abstract: The localization of the placenta by ultrasound in the second trimester has been hypothesized to have an impact on the pregnancy, in terms of antenatal, intrapartum and postnatal outcome. Objective: To evaluate the role of placental location in predicting the pregnancy outcome.

Materials and methods: It was a prospective observational study conducted between September 2011 and March 2013 at a tertiary care hospital. Placental location, as determined by midtrimester ultrasound in 620 antenatal women, was divided into five groups—anterioir, posterior, fundal, lateral and low lying placenta depending on where > 75% of the placental mass was located. Outcome variables, such as antenatal complications, intrapartum events and neonatal outcome in these women were studied. Results: Out of 620 women, 274 (44.1%) had anterior, 169 (27.2%) had posterior, 98 (15.8%) had fundal, 61 (9.8%) had lateral placentae and 18 (2.9%) had placenta previa as per the last scan done at 28 weeks. Pre-eclampsia (27.9%) and antepartum hemorrhage (19.7%) were more common in lateral placenta whereas term prelabor rupture of membranes (11.2%) was more common in fundal placenta and these findings were statistically significant. The incidence of intrauterine growth restriction (IUGR) was also found to be higher in patients with lateral (16.4%) and posteriorly (16%) implanted placenta although there was no statistically significant association.

Conclusion: Among the various placental sites of implantation, lateral location of the placenta is associated with adverse antenatal outcomes like pre-eclampsia, antepartum hemorrhage and IUGR. Copyright © 2014, Jaypee Brothers Medical Publishers (P) Ltd. All rights reserved.

Database: EMBASE
7. Outcomes of pregnancies with a low-lying placenta diagnosed on second-trimester sonography.

**Author(s):** Heller, Howard T; Mullen, Katherine M; Gordon, Robert W; Reiss, Rosemary E; Benson, Carol B

**Source:** Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine; Apr 2014; vol. 33 (no. 4); p. 691-696

**Publication Date:** Apr 2014

**Publication Type(s):** Journal Article

**PubMedID:** 24658950

Available at Journal of Ultrasound in Medicine - from HighWire - Free Full Text

**Abstract:**

**OBJECTIVES**
The purpose of this study was to determine how often a low-lying placenta, defined as a placenta ending within 2 cm of the internal cervical os but not covering it, diagnosed sonographically in the second trimester resolves before delivery. **METHODS**

After Institutional Review Board approval was obtained, 1416 pregnancies with a sonographically diagnosed low-lying placenta between 16 and 24 weeks' gestation were identified from our ultrasound database over a 5-year period. We reviewed medical records to determine the gestational age at which the low-lying placenta was first diagnosed, the gestational age at which the placenta was no longer sonographically low lying or covering the cervix, and, of those whose placentas that never cleared the internal cervical os sonographically, how many went on to cesarean delivery as a result of placental location. **RESULTS**

In total, 1220 of 1240 low-lying placentas (98.4%) that had sonographic follow up resolved to no previa before delivery; 89.9% of placentas cleared the cervix by 32 weeks, and 95.9% cleared by 36 weeks. Twenty patients (1.6%) had persistent sonographic placenta previa or a low-lying placenta at or near term, including 5 complete previas, 7 marginal previas, 5 low-lying placentas, and 3 vasa previas; all had cesarean deliveries. **CONCLUSION**

A low-lying placenta sonographically diagnosed in the second trimester typically resolves by the mid third trimester. Only rarely (1.6% of the time) does it persist to term or near term. Follow-up sonography is warranted to diagnose persistent placenta previa or vasa previa, a complication of a low-lying placenta.

**Database:** Medline
8. Pregnancy outcomes with low-lying placenta

**Author(s):** Wortman A.; McIntire D.; Dashe J.; Twickler D.

**Source:** American Journal of Obstetrics and Gynecology; Jan 2014; vol. 210 (no. 1)

**Publication Date:** Jan 2014

**Publication Type(s):** Conference Abstract

**Abstract:**

OBJECTIVE: Our purpose was to evaluate mode of delivery and pregnancy outcomes in women with low-lying placenta delivered at a single institution over a ten-year period. STUDY DESIGN: This was a retrospective cohort study of pregnancies with low-lying placenta at third-trimester sonography and delivery of live-born singleton infants at our hospital from 2002 through 2011. Women with suspected vasa previa or sonographic findings concerning for placental invasion were excluded. Low-lying placenta was diagnosed if the distance from the inferior placental edge to internal cervical os was <= 20 mm on transvaginal sonography, as measured by an investigator blinded to pregnancy outcome. Pregnancies were identified from a sonography database, and outcomes were obtained from database and record review and were stratified according to whether the placenta was <= 10 mm or 11-20 mm from the cervical os. Statistical analyses were performed using chi-square and Wilcoxon-rank sum test. RESULTS: Eighty pregnancies with low-lying placenta met inclusion criteria. Low-lying placenta was diagnosed at 35 +/- 2 weeks, with delivery at 38 +/- 2 weeks. Cesarean delivery was planned in 36 pregnancies (45%), with indication related to placentation in 14 (39%) and prompted by third-trimester vaginal bleeding in 10 (28%). Of 44 women (55%) who underwent trial of labor, 23 (53%) were delivered vaginally and 21 (48%) via cesarean, with cesarean performed for vaginal bleeding in 10 women (23%). All women delivered vaginally had placenta-os distance > 5 mm; otherwise, as shown in the table, the placenta-os distance had little impact on pregnancy outcome. CONCLUSION: Although many women with low-lying placenta are candidates for a trial of labor, morbidity is significant. The placenta-os distance did not significantly affect outcomes in our series. Regardless of the planned mode of delivery, approximately 25% developed bleeding necessitating cesarean delivery, and more than 40% experienced post-partum hemorrhage. (Table presented).

**Database:** EMBASE
9. Type and location of placenta previa affect preterm delivery risk related to antepartum hemorrhage.

Author(s): Sekiguchi, Atsuko; Nakai, Akihito; Kawabata, Ikuno; Hayashi, Masako; Takeshita, Toshiyuki

Source: International journal of medical sciences; 2013; vol. 10 (no. 12); p. 1683-1688

Publication Date: 2013

Publication Type(s): Journal Article

PubMedID: 24151440

Available at International Journal of Medical Sciences - from Europe PubMed Central - Open Access
Available at International Journal of Medical Sciences - from PubMed Central

Abstract: PURPOSETo evaluate whether type and location of placenta previa affect risk of antepartum hemorrhage-related preterm delivery. METHODSWe retrospectively studied 162 women with singleton pregnancies presenting placenta previa. Through observation using transvaginal ultrasound the women were categorized into complete or incomplete placenta previa, and then assigned to anterior and posterior groups. Complete placenta previa was defined as a placenta that completely covered the internal cervical os, with the placental margin >2 cm from the os. Incomplete placenta previa comprised marginal placenta previa whose margin adjacent to the internal os and partial placenta previa which covered the os but the margin situated within 2 cm of the os. Maternal characteristics and perinatal outcomes in complete and incomplete placenta previa were compared, and the differences between the anterior and the posterior groups were evaluated. RESULTS Antepartum hemorrhage was more prevalent in women with complete placenta previa than in those with incomplete placenta previa (59.1% versus 17.6%), resulting in the higher incidence of preterm delivery in women with complete than in those with incomplete placenta previa [45.1% versus 8.8%; odds ratio (OR) 8.51; 95% confidence interval (CI) 3.59-20.18; p < 0.001]. In complete placenta previa, incidence of antepartum hemorrhage did not significantly differ between the anterior and the posterior groups. However, gestational age at bleeding onset was lower in the anterior group than in the posterior group, and the incidence of preterm delivery was higher in the anterior group than in the posterior group (76.2% versus 32.0%; OR 6.8; 95% CI 2.12-21.84; p = 0.002). In incomplete placenta previa, gestational age at delivery did not significantly differ between the anterior and posterior groups. CONCLUSION Obstetricians should be aware of the increased risk of preterm delivery related to antepartum hemorrhage in women with complete placenta previa, particularly when the placenta is located on the anterior wall.

Database: Medline
10. Placenta praevia: Incidence, risk factors and outcome

Author(s): Kollmann M.; Gaulhofer J.; Lang U.; Klaritsch P.

Source: Ultraschall in der Medizin, Supplement; Sep 2013; vol. 34

Publication Date: Sep 2013

Publication Type(s): Conference Abstract

Abstract: Purpose: Placenta praevia is frequently associated with severe maternal bleeding leading to an increased risk for adverse outcome of mother and infant. Aim of this study was to evaluate the incidence, potential risk factors and the respective outcomes of pregnancies with placenta praevia. Material and methods: We performed a retrospective study on women diagnosed with placenta praevia in 10 styrian hospitals between 1993 - 2012. Differences between women with major placenta praevia (complete or partial placenta praevia) and minor placenta praevia (marginal placenta praevia or low-lying placenta) were evaluated. Results: 328 patients with placenta praevia were identified. The overall incidence of Placenta praevia was 0.44%, rates increased from 0.36% to 0.54%. The most important risk factors included prior uterine surgery (49%), advanced maternal age (24.7%> 35a), multiparity (57%), prior caesarean delivery (22.8%), recurrent abortions (22.8%), prior placenta praevia (10.8%) and smoking (6%). Maternal morbidity was high (antepartum bleeding 42.3%, postpartum hemorrhage 7.1%, maternal anemia 30%, comorbid abnormal placentation 4%, and hysterectomy 5.2%); however there was no maternal death. Neonatal complications including preterm birth (54.9%), low birth weight (< 2500 g: 35.6%), apgar-score after 5 minutes < 7 (5.8%) and fetal mortality (1.5%). There were no differences between women with minor placenta praevia and major placenta praevia regarding risk factors and maternal outcome. Women with major placenta praevia showed significant higher incidence of preterm delivery (OR = 6.04, CI 3.27 - 11.15, p < 0.01) birth weight < 2500 g (OR = 3.82, CI 2.05 - 7.11, p < 0.01) and apgar-score after 5 minutes < 7 (OR = 6.39, CI 1.35 - 30.35, p < 0.01). Conclusion: The incidence of placenta praevia was 0.44% and increased, equally to caesarean rates and maternal age, about 50%. Placenta praevia is associated with adverse maternal (34.15%) and neonatal (60.06%) outcome. Therefore an early detection of risk factors would be important to improve maternal and fetal outcome.

Database: EMBASE
11. Second-trimester placental location and postpartum hemorrhage.

**Author(s):** Osmundson, Sarah S; Wong, Amy E; Gerber, Susan E

**Source:** Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine; Apr 2013; vol. 32 (no. 4); p. 631-636

**Publication Date:** Apr 2013

**Publication Type(s):** Journal Article

**PubMedID:** 23525388

**Abstract:** OBJECTIVES: The purpose of this study was to assess whether low placentation in the second trimester is an independent risk factor for postpartum hemorrhage. METHODS: A retrospective cohort study of women undergoing transvaginal sonography between 18 weeks' and 23 weeks 6 days' gestation was conducted. Patients were subdivided into three groups: low-lying placenta (0.1-2.5 cm), marginal previa (touching but not overlapping the os), and complete previa (covering the os). Low placentation was used as a descriptive for all cases (low-lying placenta, marginal previa, and complete previa) in this study. A group of randomly identified control patients with normal placentation was selected for comparison. RESULTS: During the period of study, 410 women with low placentation were identified. Compared to controls, patients with second-trimester low placentation had increased rates of postpartum hemorrhage and uterotonic use. These increased risks persisted even among women in whom the low placentation resolved (odds ratio, 2.72; 95% confidence interval, 1.46-5.07; odds ratio, 2.18; 95% confidence interval, 1.24-3.84). CONCLUSIONS: Women with a second-trimester diagnosis of low placentation are at increased risk of postpartum hemorrhage.

**Database:** Medline


**Author(s):** Curti, Alessandra; Potti, Sushma; Di Donato, Nadine; Simonazzi, Giuliana; Rizzo, Nicola; Berghella, Vincenzo

**Source:** The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; Apr 2013; vol. 26 (no. 6); p. 563-565

**Publication Date:** Apr 2013

**Publication Type(s):** Journal Article

**PubMedID:** 23153020

**Abstract:** OBJECTIVES: To evaluate whether transvaginal ultrasound cervical length (TVU CL) can predict antepartum bleeding (APB) in women with low-lying placenta. STUDY DESIGN: A retrospective study was performed including pregnancies with low-lying placenta for which third trimester TVU CL was available. Multiple pregnancies were excluded. Short cervix was defined as TVU CL ≤25 mm. Outcomes of interest were compared with respect to the TVU CL. RESULTS: Forty-three cases of singleton pregnancies complicated by low-lying placenta in third trimester were identified. Short cervix was reported in 8 cases (19%). APB (75% vs. 31%, p = 0.02), blood transfusions (25% vs. 3%, p = 0.02), lower birth weight (2246 vs. 2985 g, p = 0.02), and neonatal intensive care unit (NICU) admissions (50% vs. 17%, p = 0.04) were more frequent in the women with short cervix. Rate of unplanned cesarean delivery for APB was similar between both the groups (25% vs. 28%, p = 0.83). CONCLUSIONS: In women with low-lying placenta persisting into third trimester, short cervical length can be used as a predictor for APB.

**Database:** Medline
13. Predicting the route of delivery in women with low-lying placenta using transvaginal ultrasonography: significance of placental migration and marginal sinus.

**Author(s):** Ohira, Satoshi; Kikuchi, Norihiko; Kobara, Hisanori; Osada, Ryosuke; Ashida, Takashi; Kanai, Makoto; Shiozawa, Tanri

**Source:** Gynecologic and obstetric investigation; 2012; vol. 73 (no. 3); p. 217-222

**Publication Date:** 2012

**Publication Type(s):** Journal Article

**PubMedID:** 22378482

Available at [Gynecologic and obstetric investigation](https://www.ncbi.nlm.nih.gov/pubmed/22378482) - from ProQuest (Hospital Premium Collection) - NHS Version

**Abstract:**

**BACKGROUND/AIM**
To examine the significance of placental migration and the presence of a placental marginal sinus to predict the eventual route of delivery in low-lying placenta.

**METHODS**
49 women with a low-lying placenta after 30 weeks’ gestation were studied. The distance between the internal os and leading edge of the placenta was measured weekly using transvaginal ultrasonography until 37 weeks' gestation. The relationship between the rate of placental migration, the presence of a placental marginal sinus and the eventual mode of delivery was investigated.

**RESULTS**
Although the cesarean section rate was 56.3% (9/16) in the ‘slow’ migration (0-2.0 mm/week) group, no patient (0/33) in the ‘fast’ (>2.0 mm/week) migration group underwent a cesarean section (p < 0.01). The cesarean section rate was 71.4% (5/7) in patients with a placental marginal sinus, significantly greater than the rate of 9.5% (4/42) in patients without a marginal sinus (p < 0.01).

**CONCLUSION**
A decreased rate of placental migration until 37 weeks' gestation and the presence of a placental marginal sinus were associated with subsequent cesarean delivery because of antepartum vaginal bleeding. These parameters may be useful for predicting the route of delivery in women with a low-lying placenta.

**Database:** Medline
14. Amount of hemorrhage during vaginal delivery correlates with length from placental edge to external os in cases with low-lying placenta whose length between placental edge and internal os was 1-2 cm.

**Author(s):** Nakamura, Masamitsu; Hasegawa, Junichi; Matsuaka, Ryu; Mimura, Takashi; Ichizuka, Kiyotake; Sekizawa, Akihiko; Okai, Takashi

**Source:** The journal of obstetrics and gynaecology research; Aug 2012; vol. 38 (no. 8); p. 1041-1045

**Publication Date:** Aug 2012

**Publication Type(s):** Journal Article

**PubMedID:** 22612540

Available at [The journal of obstetrics and gynaecology research](https://onlinelibrary.wiley.com/journal/10.1002) from Wiley Online Library Science, Technology and Medicine Collection 2017

**Abstract:**

**AIM**

The aim of the present study was to investigate whether amount of hemorrhage during a vaginal delivery associates with the cervical length, length from the placental edge to the os and the sum of the two in cases with a low-lying placenta. MATERIAL AND METHODSA retrospective study was performed on cases with low-lying placenta diagnosed at 35-36 weeks of gestation based on a distance of 1-2 cm from the lower placental edge to the internal os, and subject to the trial of labor. The total amount of intrapartum hemorrhage in association with the distance from the placental lowest edge to the internal os (placenta-internal os distance, A); cervical length, B; and sum of the two (placenta-external os distance; A + B) were reviewed from our medical records. RESULTSTwenty-three cases of low-lying placenta that underwent trial of labor were analyzed. Twenty (87%) of 23 patients with low-lying placenta delivered transvaginally and patients underwent emergency cesarean section due to intrapartum bleeding. The length from the placental edge to the external os (length from placental edge to internal os + cervical length) was correlated significantly with the total amount of hemorrhage during delivery ($r = -0.598$, $P = 0.004$), though neither the length from the placental edge to the internal os nor the cervical lengths correlated with it. CONCLUSIONOur results suggest that the length from the placental lowest edge to the external os negatively correlated with the amount of hemorrhage during vaginal delivery, but did not correlate with cervical length and distance from the placental edge to the internal os.

**Database:** Medline
15. Precise mid-trimester placenta localisation: does it predict adverse outcomes?

**Author(s):** Robinson, Alice J; Muller, Peter R; Allan, Richard; Ross, Richard; Baghurst, Peter A; Keirse, Marc J N C

**Source:** The Australian & New Zealand journal of obstetrics & gynaecology; Apr 2012; vol. 52 (no. 2); p. 156-160

**Publication Date:** Apr 2012

**Publication Type(s):** Journal Article

**PubMedID:** 22369139


**Abstract:**
BACKGROUND: A low-lying placenta detected at the mid-pregnancy ultrasound is commonly reported to warn against potential morbidity associated with placenta praevia. There is no information on what distance away from the internal cervical os is safe.

AIMS: We examined whether a low-lying placenta not overlapping the cervical os in the second trimester increases the risk of obstetric complications and whether there is a cut-off point at which that increase occurs.

METHODS: Adverse perinatal outcomes were examined prospectively in a cohort of women with a placenta 0-30 mm from the internal cervical os ('low-lying') at the routine mid-trimester ultrasound and compared to those with a placenta further away. Two composite outcomes of 'major' and 'minor' adverse events were predefined as primary outcome measures, requiring a sample size of 480 women with a low-lying placenta. Chi-square and Fisher's exact tests were used for statistical analysis.

RESULTS: In 1662 pregnancies ('low-lying': n = 484; 'normal': n = 1178), there was no increase in composite adverse outcomes with a low-lying placenta and no cut-off distance within 30 mm from the cervical os at which risks increased. Postpartum haemorrhage ≥ 1000 mL was more frequent with a low-lying placenta (7.6% vs 4.7%, P < 0.05). CONCLUSIONS: Women with a low-lying placenta, not overlapping the cervical os, in mid-pregnancy are at no higher risk of adverse outcomes than those with a normally located placenta, except postpartum haemorrhage. This suggests that the high-risk label can be removed from pregnancies with a low-lying placenta not overlapping the cervical os in mid-pregnancy, reducing anxiety and resource utilisation.

**Database:** Medline
OBJECTIVE: To determine whether low placentation in the midtrimester is an independent risk factor for postpartum hemorrhage. STUDY DESIGN: A retrospective cohort study was conducted of women undergoing transvaginal ultrasonography between 18 0/7 and 23 6/7 weeks gestation. Subjects with low placentation, defined as a placental edge <=2.5 cm from the cervical os, were included. They were subdivided into three groups: low-lying placenta (LLP - 0.1 to 2.5 cm), marginal previa (MP - touching but not overlapping the os), and complete previa (CP - covering the os). A group of randomly identified control subjects with normal placentation was selected for comparison. Maternal demographic characteristics, follow-up ultrasound data, and delivery data were recorded. Resolution was defined as a follow-up ultrasound that demonstrated the placental edge to be >2.5cm from the cervical os. RESULTS: Four hundred and ten women with low placentation were identified during the period of study. Resolution rates for LLP, MP and CP were 98.6%, 89.1% and 59.1% respectively. Compared to controls, subjects with midtrimester low placentation had increased rates of postpartum hemorrhage and uterotonic use. In multivariable analysis, these increased risks continued to be present even among women in whom the low placentation resolved (OR 2.81, CI 1.51- 5.24, and OR 2.30, CI 1.30-4.06, respectively). CONCLUSION: Women with a midtrimester diagnosis of low placentation remain at risk for postpartum hemorrhage despite high rates of resolution.

Database: EMBASE
OBJECTIVE: The objective of our study was to determine if women with a history of a low-lying placenta (LLP) in the second trimester have increased blood loss at delivery. STUDY DESIGN: IRB exemption was obtained. A total of 178 electronic charts were reviewed of patients referred for an ultrasound examination at a single institution between January 2009 and February 2011. 89 patients with a LLP on ultrasound between 16 and 22 weeks gestation were compared with 89 time-matched controls. A placenta was designated low-lying if its edge was within 2 cm proximity to the internal cervical os on transvaginal ultrasound. Data was analyzed using JMP (SAS Institute Inc, Cary, NC). RESULTS: Of the 89 patients in the LLP cohort, all but one resolved on repeat ultrasound in the third trimester. Age (OR 1.07, 95% CI 1.02 - 1.13) and history of dilation and curettage procedures (OR 1.55, 95% CI 1.04 - 2.45) were indentified as risk factors for LLP using univariate analysis. Gravity, parity, ethnicity, smoking status, number of prior cesarean deliveries, and uterine surgeries were similar between groups. Age remained the only independent predictor of LLP after controlling for potential confounders (adj OR 1.07, 95% CI 1.02 - 1.13). Mean change in hemoglobin following delivery in the LLP cohort (1.56 g/dL, SD 1.13) was greater than that in the control group (1.22 g/dL, SD 0.94, p .0358). Mean change in hemoglobin remained significantly different between groups after excluding the patient with persistent LLP and controlling for differences in parity and mode of delivery (p .0098). 6 patients (6.7%, 95% CI 3.1-13.9%) with LLP required inpatient admission for antepartum bleeding compared with 0 (0%, 95% CI .02-4.0%) admissions in the control group (p .029). Birthweight, incidence of preterm birth, umbilical artery pH, estimated blood loss, incidence of postpartum hemorrhage, mode of delivery, and gestational age at delivery were similar between groups. CONCLUSION: Patients with a LLP in the second trimester are at increased risk for antepartum admissions for bleeding and have increased blood loss at the time of delivery.
18. Placenta previa in the second trimester: sonographic and clinical factors associated with its resolution.

Author(s): Eichelberger, Kacey Y; Haeri, Sina; Kessler, David C; Swartz, Anthony; Herring, Amy; Wolfe, Honor M

Source: American journal of perinatology; Oct 2011; vol. 28 (no. 9); p. 735-739

Publication Date: Oct 2011

Publication Type(s): Research Support, N.i.h., Extramural Journal Article

PubMedID: 21660901

Available at American Journal of Perinatology - from PubMed Central

Abstract: We identify characteristics that predict resolution of placenta previa and develop a clinical model for likelihood of resolution. We conducted a retrospective study of 366 singleton pregnancies complicated by placenta previa diagnosed with resolution of the previa as the primary outcome. Regression analyses were performed to determine variables associated with resolution and optimal timing for repeat sonographic evaluation. A likelihood of resolution model was created using a parametric survival model with Weibull hazard function. Of the 366 cases, 84% of complete placenta previae and 98% of marginal placenta previae resolved at a mean gestational age of 28.6 ± 5.3 weeks. Only gestational age and distance from the internal cervical os at the time of diagnosis were significantly associated with resolution (P < 0.01). Likelihood of resolution was not significantly associated with any other variables. Marginal previae diagnosed in the second trimester do not appear to warrant repeat ultrasound evaluation for resolution.

Database: Medline
Risk factors for postpartum hemorrhage: can we explain the recent temporal increase?

**Author(s):** Kramer, Michael S; Dahhou, Mourad; Vallerand, Danielle; Liston, Robert; Joseph, K S

**Source:** Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC; Aug 2011; vol. 33 (no. 8); p. 810-819

**Publication Date:** Aug 2011

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 21846436

**Abstract:**

*OBJECTIVE* To assess risk factors for postpartum hemorrhage (PPH) and the extent to which changes in those risk factors may explain the rising incidence of PPH recently reported from industrialized countries.

*METHODS* We carried out a hospital-based cohort study of 103,726 consecutive deliveries from January 1, 1978, to January 31, 2007, from the computerized medical records of a tertiary-care university maternity hospital in Montreal. We examined adjusted odds ratios for any PPH (estimated blood loss > 500 mL for vaginal deliveries, > 1000 mL for Caesarean sections), severe PPH (estimated blood loss ≥ 1500 mL), and PPH accompanied by blood transfusion and/or hysterectomy.

*RESULTS* Major independent risk factors for PPH included primiparity, prior Caesarean section, placenta previa or low-lying placenta, marginal umbilical cord insertion in the placenta, transverse lie, labour induction and augmentation, uterine or cervical trauma at delivery, gestational age < 32 weeks, and birth weight ≥ 4500 g. An overall increase in rate of PPH over the study period (OR 1.029; 95% CI 1.024 to 1.034 per year) disappeared (OR 0.995; 95% CI 0.988 to 1.001 per year) after inclusion of maternal age, parity, prior Caesarean section, labour induction and augmentation, placenta previa or low-lying placenta, and abnormal placenta, with most of the reduction attributable to rises in previous Caesarean section and labour augmentation.

*CONCLUSION* Labour induction, augmentation of labour, and prior Caesarean section are significantly associated with the risk of PPH, and their increase over the study period largely explains the observed rise in PPH.

**Database:** Medline

Author(s): Rosenberg, Tom; Pariente, Gali; Sergienko, Ruslan; Wiznitzer, Arnon; Sheiner, Eyal

Source: Archives of gynecology and obstetrics; Jul 2011; vol. 284 (no. 1); p. 47-51

Publication Date: Jul 2011

Publication Type(s): Journal Article

PubMedID: 20652281

Available at Archives of Gynecology and Obstetrics - from SpringerLink

Abstract: OBJECTIVE To investigate risk factors and pregnancy outcome of patients with placenta previa. METHODSA population-based study comparing all singleton pregnancies of women with and without placenta previa was conducted. Stratified analysis using multiple logistic regression models was performed to control for confounders. RESULTS During the study period, there were 185,476 deliveries, of which, 0.42% were complicated with placenta previa. Using a multivariable analysis with backward elimination, the following risk factors were independently associated with placenta previa: infertility treatments (OR 1.97; 95% CI 1.45-2.66; P < 0.001), prior cesarean delivery (CD; OR 1.76; 95% CI 1.48-2.09; P < 0.001) and advanced maternal age (OR 1.08; 95% CI 1.07-1.09; P < 0.001). Placenta previa was significantly associated with adverse outcomes such as peripartum hysterectomy (5.3 vs. 0.04%; P < 0.001), previous episode of second trimester bleeding (3.9 vs. 0.05%; P < 0.001), blood transfusion (21.9 vs. 1.2%; P < 0.001), maternal sepsis (0.4 vs. 0.02%; P < 0.001), vasa previa (0.5 vs. 0.1%; P < 0.001), malpresentation (19.8 vs. 5.4%; P < 0.001), postpartum hemorrhage (1.4 vs. 0.5%; P = 0.001) and placenta accreta (3.0 vs. 1.3%; P < 0.001). Placenta previa was significantly associated with adverse perinatal outcomes such as higher rates of perinatal mortality (6.6 vs. 1.3%; P < 0.001), an Apgar score <7 after 1 and 5 min (25.3 vs. 5.9%; P < 0.001, and 7.1 vs. 2.6%, P < 0.001, respectively), congenital malformations (11.5 vs. 5.1%; P < 0.001) and intrauterine growth restriction (3.6 vs. 2.1%; P = 0.003). Using another multivariable logistic regression model, with perinatal mortality as the outcome variable, controlling for confounders, such as preterm birth, maternal age, etc., placenta previa was not found as an independent risk factor for perinatal mortality (weighted OR 1.018; 95% CI 0.74-1.40; P = 0.910). CONCLUSIONS Infertility treatments, prior cesarean section, and advanced maternal age are independent risk factors for placenta previa. An increase in the incidence of these risk factors probably contributes to a rise in the number of pregnancies complicated with placenta previa and its association with adverse maternal and perinatal outcomes. Careful surveillance of these risk factors is recommended with timely delivery in order to reduce the associated complications.

Database: Medline
21. Risk factors and pregnancy outcome in different types of placenta previa.

**Author(s):** Bahar, Ahmed; Abusham, Abdullah; Eskandar, Mamdoh; Sobande, Adekunle; Alsunaidi, Mohamed

**Source:** Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstétrique et gynecologie du Canada : JOGC; Feb 2009; vol. 31 (no. 2); p. 126-131

**Publication Date:** Feb 2009

**Publication Type(s):** Journal Article

**PubMedID:** 19327211

**Abstract:**

OBJECTIVE To compare risk factors and pregnancy outcome between different types of placenta previa (PP).

MATERIALS AND METHODS We conducted a retrospective study of 306 women presenting with PP over a 10-year period from January 1996 to December 2005. Differences between women with major and minor PP regarding age, parity, history of Caesarean section, antepartum hemorrhage, preterm deliveries, placenta accreta, Caesarean hysterectomy, operative complications, and neonatal outcome were identified using Mann-Whitney U test, chi-square test, and multivariate logistic regression.

RESULTS The overall incidence of PP was 0.73%. Major PP (complete or partial PP) occurred in 173 women (56.5%) and minor PP (marginal PP or low-lying placenta) in 133 women (43.5%). There were no differences between women with major and minor PP regarding age, parity, and previous miscarriages. After controlling for confounding factors, women with major PP showed a significantly higher incidence of antepartum hemorrhage (OR 3.18; 95% CI 1.58-6.4, P = 0.001), placenta accreta (OR 3.2; 95% CI 1.22-8.33, P = 0.017), and hysterectomy (OR 5.1; 95% CI 1.31-19.86, P = 0.019). Antepartum hemorrhage in women with PP was associated with premature delivery (OR 14.9; 95% CI 4.9-45.1, P < 0.001), more commonly in women with major PP. The only significant difference between women with major and minor PP regarding neonatal outcome was that major PP was associated with a higher incidence of admission to the neonatal intensive care unit (P = 0.014).

CONCLUSION Complete or partial placenta previa is associated with higher morbidity than marginal placenta previa or low-lying placenta.

**Database:** Medline
22. Blood loss in low-lying placenta: placental edge to cervical internal os distance of less vs. more than 2 cm.

Author(s): Matsubara, Shigeki; Ohkuchi, Akihide; Kikkawa, Masashi; Izumi, Akio; Kuwata, Tomoyuki; Usui, Rie; Watanabe, Takashi; Suzuki, Mitsuaki

Source: Journal of perinatal medicine; 2008; vol. 36 (no. 6); p. 507-512

Publication Date: 2008

Publication Type(s): Comparative Study Journal Article

PubMedID: 18673083

Abstract: OBJECTIVE To reconfirm that a low-lying placenta, with placental edge-internal os distance of 0-4 cm, is a risk factor for blood loss during delivery, and to determine whether blood loss differs between edge-os distance of 2 cm. METHODS We compared total blood loss between 73 singleton pregnant women with edge-os distance of 0-4.0 cm vs. controls. We also compared total blood loss between pregnant women with distance of 0-2.0 cm (lower) vs. 2.1-4.0 cm (higher). RESULTS Total blood loss was significantly greater in women with placental edge-os distance of < or =4 cm than controls in both delivery modes. The lower group showed a significantly higher incidence of excessive hemorrhage during vaginal delivery (60 vs. 19%, P=0.046) and bled more (median 1240 vs. 860 mL, P=0.059) than the higher group. Although this did not reach statistical significance, the lower group more frequently bled antepartum, required emergent cesarean section, and delivered abdominally. Regression analysis showed no association between the amount of blood loss and the edge-os distance in both delivery modes. CONCLUSION Pregnant women with edge-os distance of 2.1-4.0 cm are of highest level of concern as are women with 0-2.0 cm distance.

Database: Medline
23. Second trimester placental location as a predictor of an adverse pregnancy outcome.

**Author(s):** Magann, E F; Doherty, D A; Turner, K; Lanneau, G S; Morrison, J C; Newnham, J P

**Source:** Journal of perinatology : official journal of the California Perinatal Association; Jan 2007; vol. 27 (no. 1); p. 9-14

**Publication Date:** Jan 2007

**Publication Type(s):** Journal Article

**PubMedID:** 17080095

**Abstract:** OBJECTIVE To determine if the second trimester placental location is associated with perinatal outcomes. MATERIALS AND METHODS Observational study of placental location and the subsequent risk of an adverse pregnancy outcome. Placental location was divided into three categories, low, high lateral and high fundal. RESULTS There were 3336 pregnancies analyzed in this study. Low implantation sites had a greater risk of preterm labor (odds ratio (OR) 1.70, 95% confidence interval (CI) 1.38 to 2.90, P<0.001), preterm delivery (OR 1.86, 95% CI 1.36 to 2.54, P<0.001), fewer fetuses with macrosomia (OR 0.56, 95% CI 0.38 to 0.83, P=0.010) and reduced risk of postpartum hemorrhage (OR 0.56, 95% CI 0.46 to 0.95, P=0.026). High lateral implantations had a greater risk of low 1-min (OR 1.80, 95% CI 1.11 to 2.93, P=0.017) and 5-min (OR 3.49, 95% CI 1.46 to 8.36, P=0.005) Apgar scores. CONCLUSIONS Low placental implantation was associated with an increased risk of preterm labor, preterm delivery and a reduced risk of postpartum hemorrhage, and of a macrosomic fetus. High lateral implantation was associated with low Apgar scores.

**Database:** Medline


**Author(s):** Chama, C M; Wanonyi, I K; Usman, J D

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Aug 2004; vol. 24 (no. 5); p. 516-518

**Publication Date:** Aug 2004

**Publication Type(s):** Journal Article

**PubMedID:** 15369930

**Abstract:** A study of 895 consecutive pregnant women studied by transabdominal ultrasound scan showed an incidence of 14.6% of low-lying placenta at 12-14 weeks' gestation. Longitudinal follow-up of those with low-lying placenta showed that 85% of them had normally situated placenta at term. However, for those with partial or total placenta praevia at 30 weeks' gestation, 60% and 75%, respectively, persisted as major placenta praevia at term. A total of 45% of those with low-lying placenta at recruitment had threatened abortion while 15.7% had antepartum haemorrhage. The caesarean section rate was as high as 26% among the study population compared with 8.4% among the general population (P < 0.005). It is recommended that all antenatal women should have at least one ultrasound scan in the second or third trimester for placental localisation. Those found to have major placenta praevia in the third trimester should be closely followed-up.

**Database:** Medline
25. Effect of maternal age on blood loss during parturition: a retrospective multivariate analysis of 10,053 cases.

**Author(s):** Ohkuchi, Akihide; Onagawa, Tamaho; Usui, Rie; Koike, Toshimitsu; Hiratsuka, Mitsuhiro; Izumi, Akio; Ohkusa, Takashi; Matsubara, Shigeki; Sato, Ikuo; Suzuki, Mitsuaki; Minakami, Hisanori

**Source:** Journal of perinatal medicine; 2003; vol. 31 (no. 3); p. 209-215

**Publication Date:** 2003

**Publication Type(s):** Journal Article

**PubMedID:** 12825476

**Abstract:**

OBJECTIVE: An extensive study as to whether maternal age itself is a risk factor for blood loss during parturition.

METHOD: A total of 10,053 consecutive women who delivered a singleton infant were studied. The excess blood loss was defined separately for women with vaginal and cesarean deliveries as > or = 90th centile value for each delivery mode. The effects of 13 potential risk factors on blood loss were analyzed using multivariate analysis.

RESULT: The 90th centile value of blood loss was 615 ml and 1,531 ml for women with vaginal and cesarean deliveries, respectively. A low lying placenta (odds ratio [OR], 4.4), previous cesarean (3.1), operative delivery (2.6), leiomyoma (1.9), primiparity (1.6), and maternal age > or = 35 years (1.5) were significant independent risk factors for excess blood loss in women with vaginal delivery. Placenta previa (6.3), leiomyoma (3.6), low lying placenta (3.3), and maternal age > or = 35 years (1.8) were significant independent risk factors for excess blood loss in women with cesarean sections.

CONCLUSION: Maternal age of > or = 35 years was an independent risk factor for excess blood loss irrespective of the mode of delivery, even after adjusting for age-related complications such as leiomyoma, placenta previa, and low lying placenta.

**Database:** Medline


**Author(s):** Ogueh, O; Morin, L; Usher, R H; Benjamin, A

**Source:** International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics; Oct 2003; vol. 83 (no. 1); p. 11-17

**Publication Date:** Oct 2003

**Publication Type(s):** Comparative Study Journal Article

**PubMedID:** 14511867

**Abstract:**

OBJECTIVE: To determine the obstetrical outcome of pregnancies initially complicated by a low-lying placenta in the second trimester.

METHODS: We reviewed the obstetric outcome of all women with singleton deliveries from 1 January 1997 to 31 March 1999 and compared the 703 women with low-lying placentas (placentas in the lower uterine segment) with the 6938 women with placentas that were normally situated in the upper uterine segment at 16-22 weeks' gestation.

RESULTS: Pregnancies complicated by a low-lying placenta in the second trimester were not associated with antepartum hemorrhage, preterm births, preterm prelabor rupture of membranes, pregnancy-induced hypertension, fetal growth restriction or cesarean births. However, they had a higher incidence of postpartum hemorrhage (odds ratio 1.768, 95% confidence interval 1.137, 2.748) than women with a normally situated placenta in the second trimester.

CONCLUSION: Pregnant women with low-lying placentas in the second trimester have a higher incidence of postpartum hemorrhage and hence, it would be prudent to carefully manage the third stage of labor in these women.


27. Midtrimester placental localisation

Author(s): Ayyad I.; Dabbas M.; Khalid D.B.

Source: International Journal of Medicine; Apr 2003; vol. 5 (no. 2); p. 80-83

Publication Date: Apr 2003

Publication Type(s): Article

Abstract:Objective- To identify the correlation between a low lying placenta at early scanning and the development of major placenta praevia in late pregnancy, and the affect of low-lying placenta on the incidence of antepartum haemorrhage. Design- Clinical and analytical study. Setting- Department of Obstetrics and Gynecology, Prince Rashed Bin Al Hassan Hospital, Irbed-Jordan. Materials and Methods- The study sample included 1026 singleton pregnancies at Prince Rashed Bin Al-Hassan Hospital in Irbed, Jordan. We retrospectively analysed 1026 women with singleton pregnancies, who were studied by ultrasound scan at 18 to 20 weeks of gestation. The subsequent antenatal course and pregnancy outcomes were ascertained from maternity case notes, particularly details of early scan and any subsequent scans, antipartum complications and the mode of delivery. Results- There were 197 cases of low-lying placenta at 18 to 20 weeks (18.5%) and only 5 cases (0.5%) persisted as major placenta praevia at delivery. There was a very low positive predictive value for major placenta (2.6%). It was also found that 7% of women had antepartum haemorrhage later in pregnancy irrespective to the site of the placenta. Conclusion- Our results showed that the majority of cases who were diagnosed to have low placental site at 18-20 weeks did not develop placenta praevia on labour. In our study, low-lying placenta at midtrimester occurred in 18.5%, while only 0.5% persisted at term. Conduction of midtrimester placental localisation and repeat scan for placenta praevia in women who have history of recurrent vaginal bleeding and in those with an unstable lie in late pregnancy, regardless of the midtrimester placental site is recommended.

Database: EMBASE

Author(s): Sheiner, E; Shoham-Vardi, I; Hallak, M; Hershkowitz, R; Katz, M; Mazor, M

Source: The Journal of maternal-fetal medicine; Dec 2001; vol. 10 (no. 6); p. 414-419

Publication Date: Dec 2001

Publication Type(s): Journal Article

PubMedID: 11798453

Abstract: OBJECTIVE To determine the incidence, obstetric risk factors and perinatal outcome of placenta previa. STUDY DESIGN All singleton deliveries at our institution between 1990 and 1998 complicated with placenta previa were compared with those without placenta previa. RESULTS Placenta previa complicated 0.38% (n = 298) of all singleton deliveries (n = 78,524). A back-step multiple logistic regression model found the following factors to be independently correlated with the occurrence of placenta previa: maternal age above 40 years (OR 3.1, 95% CI 2.0-4.9), infertility treatments (OR 3.1, 95% CI 1.8-5.6), a previous Cesarean section (OR 1.8, 95% CI 1.4-2.4), a history of habitual abortions (OR 1.3, 95% CI 1.3-2.7) and Jewish ethnicity (OR 1.3, 95% CI 1.1-1.8). Pregnancies complicated with placenta previa had significantly higher rates of second-trimester bleeding (OR 156.0, 95% CI 87.2-277.5), pathological presentations (OR 7.6, 95% CI 5.7-10.1), abruptio placentae (OR 13.1, 95% CI 8.2-20.7), congenital malformations (OR 2.6, 95% CI 1.5-4.2), perinatal mortality (OR 2.6, 95% CI 1.1-5.6), Cesarean delivery (OR 57.4, 95% CI 40.7-81.4), Apgar scores at 5 min lower than 7 (OR 4.4, 95% CI 2.3-8.3), placenta accreta (OR 3.6, 95% CI 1.1-9.9) postpartum hemorrhage (OR 3.8, 95% CI 1.2-10.5), postpartum anemia (OR 5.5, 95% CI 4.4-6.9) and delayed maternal and infant discharge from the hospital (OR 10.9, 95% CI 7.3-16.1) as compared to pregnancies without placenta previa. In a multivariable analysis investigating risk factors for perinatal mortality, the following were found to be independent significant factors: congenital malformations, placental abruption, pathological presentations and preterm delivery. In contrast, placenta previa and Cesarean section were found to be protective factors against the occurrence of perinatal mortality while controlling for confounders. CONCLUSION Although an abnormal implantation per se was not an independent risk factor for perinatal mortality, placenta previa should be considered as a marker for possible obstetric complications. Hence, the detection of placenta previa should encourage a careful evaluation with timely delivery in order to reduce the associated maternal and perinatal complications.

Database: Medline
29. Diagnosis of low-lying placenta: can migration in the third trimester predict outcome?

**Author(s):** Oppenheimer, L; Holmes, P; Simpson, N; Dabrowski, A

**Source:** Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology; Aug 2001; vol. 18 (no. 2); p. 100-102

**Publication Date:** Aug 2001

**Publication Type(s):** Journal Article

**PubMedID:** 11529986

Available at Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology - from Wiley Online Library Science, Technology and Medicine Collection 2017

**Abstract:**

**OBJECTIVES** To investigate the relationship between the rate of migration of a low-lying placenta during the third trimester and the eventual route of delivery. **METHODS** All patients with a placenta lying within 3 cm of the internal cervical os or overlapping it on transvaginal ultrasound at > or = 26 weeks' gestation were included in the study. The exact distance between the center of the internal cervical os and the leading edge of the placenta was measured by transvaginal sonography, repeated at approximately 4-week intervals until delivery. **RESULTS** The mean rates of migration in patients who had (n = 7) and who did not have (n = 29) Cesarean section for placenta previa were +0.3 mm/week and +5.4 mm/week, respectively (P < 0.01). No Cesarean section for placenta previa was performed. For those between -20 mm and +20 mm, sufficient migration to avoid Cesarean section occurred in 88.5% of cases. Beyond a 20 mm overlap, significant placental migration did not occur and all patients required Cesarean section. **CONCLUSION** Placental migration may occur progressively throughout the third trimester. The initial position of the placental edge and the subsequent rate of migration can be used to predict the eventual route of delivery.

**Database:** Medline
30. The relevance of placental location at 20-23 gestational weeks for prediction of placenta previa at delivery: evaluation of 8650 cases.

Author(s): Becker, R H; Vonk, R; Mende, B C; Ragosch, V; Entezami, M

Source: Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology; Jun 2001; vol. 17 (no. 6); p. 496-501

Publication Date: Jun 2001

Publication Type(s): Comparative Study Journal Article Evaluation Studies

PubMedID: 11422970

Available at Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology - from Wiley Online Library Science, Technology and Medicine Collection 2017

Abstract: OBJECTIVE To determine the correlation between placental position at 20-23 weeks and incidence of birth complications caused by placental position. SUBJECTS AND METHODS In an ongoing prospective study, placental position was determined by transabdominal sonography as part of anomaly scanning at 20-23 gestational weeks, followed by transvaginal sonography in uncertain or suspicious situations. Examination was performed in 9532 cases; feedback was obtained from 8650 patients (90.7%). RESULTS Transabdominal sonography was followed by transvaginal scan in 363 of 8650 cases (4.2%). In 8551 cases (98.9%), we found normal placental position, with the placenta not reaching the internal os and a Cesarean section rate of 17.1% (1458/8551). The incidence of 'low placental position', with the placenta reaching the internal os was 0.66% (57/8650), with a Cesarean section rate of 21% (12/57). In 0.49% (42/8650) of cases, the placenta overlapped the internal os at 20-23 weeks; Cesarean section because of placenta previa or bleeding was performed in 28 of 8650 cases (0.32%). Vaginal delivery was possible in 43% of cases (13/30), when the overlap did not exceed 25 mm. If the overlap exceeded 25 mm (12 cases), no vaginal delivery was reported. There was no reported case of placenta previa missed at the 20-23-week scan. CONCLUSION At 20-23 weeks, a combination of routine transabdominal and indication-based transvaginal location of placental position is a powerful tool in predicting placenta previa at delivery. The advantage of determining placental position at this stage of pregnancy is a low false-positive rate compared to at earlier stages of pregnancy. We conclude that an overlapping placenta at 20-23 weeks has the consequence of a high probability of placenta previa at delivery. An overlap of 25 mm or more at 20-23 weeks seems to be incompatible with later vaginal delivery.

Database: Medline
31. Second trimester sonographically diagnosed placenta previa: prediction of persistent previa at birth.

Author(s): Zelop, C C; Bromley, B; Frigoletto, F D; Benacerraf, B R

Source: International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics; Mar 1994; vol. 44 (no. 3); p. 207-210

Publication Date: Mar 1994

Publication Type(s): Journal Article

PubMedID: 7909757

Abstract: OBJECTIVES We sought to determine the natural history of second trimester sonographically diagnosed placenta previa, and to ascertain whether the position of the placenta with respect to the cervical os at second trimester sonography can accurately predict persistence of the placenta previa at term. METHODS The study population included all women consecutively diagnosed by ultrasound with placenta previa between 14 and 20 weeks' gestation. Medical records of the patients requiring cesarean section were reviewed to determine the presence of placenta previa. We reviewed the second trimester sonogram of patients who underwent abdominal delivery for placental and nonplacental indications to determine whether the central (symmetrical) versus the partial (asymmetrical) position of the placenta with respect to the internal os predicted the presence of placenta previa at delivery. RESULTS A total of 925 second trimester patients were sonographically identified as having placenta previa. Two hundred and sixty seven patients underwent cesarean delivery, 43 of which had placenta previa (43/925 or 4.6%). Twenty-two of the 43 were asymptomatic without antepartum bleeding. Analysis of the second trimester position of the placenta revealed that symmetry of the placenta with respect to the internal os at second trimester scan had a sensitivity of 49% for prediction of placenta previa at birth. CONCLUSIONS The degree of placental symmetry with respect to the internal os during the second trimester successfully predicted the previas most likely to persist at delivery with a sensitivity of 49% (95% CI 34-64) and specificity of 93%.

Database: Medline
32. The mid-trimester placenta previa: a prospective follow-up.

Author(s): Ancona, S; Chatterjee, M; Rhee, I; Sicurenza, B

Source: European journal of radiology; 1990; vol. 10 (no. 3); p. 215-216

Publication Date: 1990

Publication Type(s): Journal Article

PubMedID: 2192886

Abstract: One hundred and fifty-six mid-trimester sonograms were performed at our prenatal diagnostic unit. Twenty women were found to have a low-lying placenta or placenta previa and were followed by serial ultrasound examinations to observe changes in placental position. Eighty percent of women, i.e., 16/20, with a low-lying placenta had converted to normal implantation by the time of delivery. Most of the conversions had taken place at approx. 34 weeks of gestation. The patients with mid-trimester low-lying placenta had an increased risk of third-trimester bleeding, abruptio placentae and cesarean sections. The infants were also at risk of premature delivery. Patients with mid-trimester low-lying or placenta previa should be followed by ultrasound to monitor delivery.

Database: Medline
<table>
<thead>
<tr>
<th>#</th>
<th>Database</th>
<th>Search term</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medline</td>
<td>(&quot;Low-lying placenta&quot; OR &quot;placenta praevia&quot; OR &quot;placenta previa&quot;).ti,ab</td>
<td>3000</td>
</tr>
<tr>
<td>2</td>
<td>Medline</td>
<td>exp &quot;PLACENTA PREVIA&quot;/</td>
<td>2643</td>
</tr>
<tr>
<td>3</td>
<td>Medline</td>
<td>(1 OR 2)</td>
<td>4015</td>
</tr>
<tr>
<td>4</td>
<td>Medline</td>
<td>(loss ADJ2 blood).ti,ab</td>
<td>46241</td>
</tr>
<tr>
<td>5</td>
<td>Medline</td>
<td>exp &quot;BLOOD LOSS, SURGICAL&quot;/</td>
<td>15371</td>
</tr>
<tr>
<td>7</td>
<td>Medline</td>
<td>exp HEMORRHAGE/</td>
<td>305089</td>
</tr>
<tr>
<td>8</td>
<td>Medline</td>
<td>(bleeding OR haemorrhag* OR hemorrhag*).ti,ab</td>
<td>368726</td>
</tr>
<tr>
<td>9</td>
<td>Medline</td>
<td>(4 OR 5 OR 7 OR 8)</td>
<td>540975</td>
</tr>
<tr>
<td>10</td>
<td>Medline</td>
<td>(labour OR labor OR deliver* OR birth*).ti,ab</td>
<td>831533</td>
</tr>
<tr>
<td>11</td>
<td>Medline</td>
<td>exp &quot;LABOR, OBSTETRIC&quot;/</td>
<td>44135</td>
</tr>
<tr>
<td>12</td>
<td>Medline</td>
<td>(10 OR 11)</td>
<td>848551</td>
</tr>
<tr>
<td>13</td>
<td>Medline</td>
<td>(3 AND 9 AND 12)</td>
<td>905</td>
</tr>
<tr>
<td>14</td>
<td>Medline</td>
<td>(resolved).ti,ab</td>
<td>136135</td>
</tr>
<tr>
<td>15</td>
<td>Medline</td>
<td>(3 AND 14)</td>
<td>14</td>
</tr>
<tr>
<td>16</td>
<td>Medline</td>
<td>(&quot;second trimester&quot;).ti,ab</td>
<td>12582</td>
</tr>
<tr>
<td>17</td>
<td>Medline</td>
<td>exp &quot;PREGNANCY TRIMESTER, SECOND&quot;/</td>
<td>14044</td>
</tr>
<tr>
<td>18</td>
<td>Medline</td>
<td>(16 OR 17)</td>
<td>21580</td>
</tr>
<tr>
<td>19</td>
<td>Medline</td>
<td>(13 AND 18)</td>
<td>70</td>
</tr>
<tr>
<td>Step</td>
<td>Database</td>
<td>Query</td>
<td>Results</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>20</td>
<td>Medline</td>
<td>exp &quot;POSTPARTUM HEMORRHAGE&quot;/</td>
<td>6175</td>
</tr>
<tr>
<td>21</td>
<td>Medline</td>
<td>((antepartum OR intrapartum OR postpartum) ADJ2 (haemorrhag* OR hemorrhag* OR bleed*)).ti,ab</td>
<td>5923</td>
</tr>
<tr>
<td>22</td>
<td>Medline</td>
<td>(20 OR 21)</td>
<td>9163</td>
</tr>
<tr>
<td>23</td>
<td>Medline</td>
<td>(3 AND 18 AND 22)</td>
<td>34</td>
</tr>
<tr>
<td>24</td>
<td>Medline</td>
<td>(20 ADJ2 (weeks OR wks)).ti,ab</td>
<td>20268</td>
</tr>
<tr>
<td>25</td>
<td>Medline</td>
<td>(twenty ADJ2 (weeks OR wks)).ti,ab</td>
<td>2229</td>
</tr>
<tr>
<td>26</td>
<td>Medline</td>
<td>(24 OR 25)</td>
<td>22401</td>
</tr>
<tr>
<td>27</td>
<td>Medline</td>
<td>(3 AND 22 AND 26)</td>
<td>12</td>
</tr>
<tr>
<td>28</td>
<td>Medline</td>
<td>exp &quot;REMISSION, SPONTANEOUS&quot;/</td>
<td>18840</td>
</tr>
<tr>
<td>29</td>
<td>Medline</td>
<td>(3 AND 28)</td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td>Medline</td>
<td>(3 AND 22)</td>
<td>676</td>
</tr>
<tr>
<td>31</td>
<td>Medline</td>
<td>(&quot;low lying placent*&quot;).ti,ab</td>
<td>131</td>
</tr>
<tr>
<td>32</td>
<td>Medline</td>
<td>(26 AND 31)</td>
<td>11</td>
</tr>
<tr>
<td>33</td>
<td>Medline</td>
<td>(18 AND 31)</td>
<td>30</td>
</tr>
<tr>
<td>34</td>
<td>Medline</td>
<td>(&quot;low lying&quot; ADJ2 placent*).ti,ab</td>
<td>143</td>
</tr>
<tr>
<td>35</td>
<td>Medline</td>
<td>(22 AND 34)</td>
<td>39</td>
</tr>
<tr>
<td>36</td>
<td>EMBASE</td>
<td>(&quot;low lying&quot; ADJ2 placent*).ti,ab</td>
<td>230</td>
</tr>
<tr>
<td>38</td>
<td>EMBASE</td>
<td>exp &quot;OBSTETRIC HEMORRHAGE&quot;/</td>
<td>14407</td>
</tr>
<tr>
<td>39</td>
<td>EMBASE</td>
<td>((antepartum OR intrapartum OR postpartum) ADJ2</td>
<td>8433</td>
</tr>
<tr>
<td></td>
<td>Database</td>
<td>Query</td>
<td>Results</td>
</tr>
<tr>
<td>---</td>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>40</td>
<td>EMBASE</td>
<td>(haemorrhag* OR hemorrhag* OR bleed*).ti,ab</td>
<td>15983</td>
</tr>
<tr>
<td>41</td>
<td>EMBASE</td>
<td>(38 OR 39)</td>
<td>15983</td>
</tr>
<tr>
<td>42</td>
<td>Medline</td>
<td>(low ADJ2 placent*).ti,ab</td>
<td>805</td>
</tr>
<tr>
<td>43</td>
<td>Medline</td>
<td>(22 AND 42)</td>
<td>62</td>
</tr>
<tr>
<td>44</td>
<td>Medline</td>
<td>(marginal ADJ2 placent*).ti,ab</td>
<td>80</td>
</tr>
<tr>
<td>45</td>
<td>Medline</td>
<td>(22 AND 44)</td>
<td>9</td>
</tr>
<tr>
<td>46</td>
<td>EMBASE</td>
<td>(low ADJ2 placent*).ti,ab</td>
<td>751</td>
</tr>
<tr>
<td>47</td>
<td>EMBASE</td>
<td>(40 AND 46)</td>
<td>96</td>
</tr>
<tr>
<td>48</td>
<td>EMBASE</td>
<td>(resolved).ti,ab</td>
<td>159333</td>
</tr>
<tr>
<td>49</td>
<td>EMBASE</td>
<td>(46 AND 48)</td>
<td>9</td>
</tr>
<tr>
<td>50</td>
<td>EMBASE</td>
<td>(20 ADJ2 (weeks OR wks)).ti,ab</td>
<td>24568</td>
</tr>
<tr>
<td>51</td>
<td>EMBASE</td>
<td>(twenty ADJ2 (weeks OR wks)).ti,ab</td>
<td>2512</td>
</tr>
<tr>
<td>52</td>
<td>EMBASE</td>
<td>(&quot;second trimester&quot;).ti,ab</td>
<td>17026</td>
</tr>
<tr>
<td>53</td>
<td>EMBASE</td>
<td>exp &quot;SECOND TRIMESTER PREGNANCY&quot;/</td>
<td>19982</td>
</tr>
<tr>
<td>54</td>
<td>EMBASE</td>
<td>(50 OR 51 OR 52 OR 53)</td>
<td>52173</td>
</tr>
<tr>
<td>55</td>
<td>EMBASE</td>
<td>exp &quot;PLACENTA PREVIA&quot;/</td>
<td>5508</td>
</tr>
<tr>
<td>56</td>
<td>EMBASE</td>
<td>(54 AND 55)</td>
<td>363</td>
</tr>
</tbody>
</table>