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Fetomaternal Haemorrhage

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1. Placental findings in feto-maternal hemorrhage in livebirth and stillbirth

Author(s): Ravishankar S.; Migliori A.; Struminsky J.; Has P.; Sung C.J.; He M.

Source: Pathology Research and Practice; Apr 2017; vol. 213 (no. 4); p. 301-304

Publication Date: Apr 2017

Publication Type(s): Article

Abstract: Feto-maternal hemorrhage (FMH) is not an uncommon event during pregnancy with important clinical implications for both maternal and fetal outcomes. The diagnosis is often made using Kleihauer-Betke (KB) test. As FMH occurs transplacentally, examination of the placenta may contribute to the diagnosis of FMH. This retrospective case-control study aims to examine the placental features associated FMH in patients with known positive KB test results. When compared with KB negative placentas (n = 88), KB positive placentas (n = 49) had significantly higher incidence of pallor (6/49 vs 0/88, p = 0.0017), IVT (11/49 vs. 5/88, p = 0.0032) and nRBCs (12/49 vs. 4/88, p = 0.0008). Autopsy cases with fetal or neonatal death due to FMH, (n = 13) compared to a cohort of 162 placentas associated with other, non-FMH causes of death also had significantly higher frequency of pallor (5/13 vs 0/162, p < 0.0001), IVT (6/13 vs 24/162, p = 0.011) and nRBCs (11/13 vs 67/162, p = 0.003). Pallor and nRBC were also associated with higher volume of FMH. Placental parenchymal pallor, intervillous thrombi and presence of nRBCs are significantly associated with documented FMH in both normal pregnancies and pregnancies associated with fetal or neonatal death. The presence of these findings, especially in combination, may suggest the need for maternal KB testing to rule out FMH and neonatal monitoring and/or intervention.

Database: EMBASE

2. Biochemical analysis of intraplacental choriocarcinoma and fetomaternal transfusion

Author(s): Ishiguro T.; Suda K.; Enomoto T.

Source: Journal of Obstetrics and Gynaecology Research; Mar 2017; vol. 43 (no. 3); p. 587-591

Publication Date: Mar 2017

Publication Type(s): Article

Available in full text at Journal of Obstetrics and Gynaecology Research - from John Wiley and Sons

Abstract: Intraplacental choriocarcinoma is one of the rarest forms of gestational tumors and is believed to be one of the causes of fetomaternal transfusion (FMT). A 35-year-old woman, gravida 2, para 2, with a history of two vaginal deliveries, was incidentally diagnosed as having stage I gestational intraplacental choriocarcinoma with a FIGO/World Health Organization 2000 risk score of 2 after term delivery. This disease caused neonatal anemia but did not metastasize to either the mother or infant. Short tandem repeat analysis with laser microdissection revealed that the tumor had originated from the current pregnancy. Serological test and immunohistochemical analysis revealed that the patient and her baby suffered from FMT. She has been free from disease without any medical intervention for the last 1 year. A combination of multiple biochemical analyses might help us diagnose the precursor pregnancy of a gestational choriocarcinoma and FMT.

Database: EMBASE

3. Term pregnancy with choriocarcinoma presenting as severe fetal anemia and postpartum hemorrhage.

Author(s): Peng, Hsiu-Huei; Ng, Zooi-Ping; Tang, Yun-Hsin; Chua, Angelica Anne A; Huang, Kuan-Gen

Source: Taiwanese journal of obstetrics & gynecology; Jun 2016; vol. 55 (no. 3); p. 430-433

Publication Date: Jun 2016

Publication Type(s): Case Reports Journal Article

Available in full text at Taiwanese Journal of Obstetrics and Gynecology - from Free Access Content

Abstract:OBJECTIVE Term pregnancy with choriocarcinoma is a rare condition that can be a serious health threat to both the mother and the fetus. We present a rare case of term pregnancy with choriocarcinoma presenting as severe fetal anemia and postpartum hemorrhage.CASE REPORTA 34-year-old woman, gravida 3 para 2, was admitted for profuse vaginal bleeding 2 weeks after cesarean delivery of a full-term anemic baby. Transvaginal sonography revealed a 4.7-cm×10.6-cm heterogenous lesion in the endometrial cavity. Dilatation and curettage was done and a pathologic report revealed choriocarcinoma. Metastatic workup showed lung metastasis. The patient achieved remission after eight cycles of chemotherapy in the form of etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine. There was no evidence of recurrence in the subsequent 3 years of regular follow up.CONCLUSIONAlthough fetomaternal hemorrhage is a rare form of presentation of choriocarcinoma, its presence should alert the physician to investigate the cause further. This chemotherapy regimen was effective in our case and the patient needed to be followed up carefully.

Database: Medline

4. Fetomaternal hemorrhage complicated pregnancy: Risks, identification, and management

Author(s): Stefanovic V.

Source: Current Opinion in Obstetrics and Gynecology; Apr 2016; vol. 28 (no. 2); p. 86-94

Publication Date: Apr 2016

Publication Type(s): Review

Available in full text at Current Opinion in Obstetrics and Gynecology - from Ovid

Abstract: Purpose of review: This article aims not only to review recent literature about the clinical features of massive fetomaternal hemorrhage (FMH) and identification of risk factors, but also to alert obstetricians and pediatricians to this underdiagnosed and underestimated severe obstetrical issue. In addition, a simplified flow chart for the antenatal management of suspected FMH is proposed. Recent findings: Improvements in obstetrical and neonatal care have decreased perinatal morbidity and mortality and the rate of stillbirth. Unfortunately, because of the nonspecific signs on presentation, adverse outcome associated with massive FMH has not followed this trend and still has devastating consequences. As even the definition varies among publications and there is lack of universal screening, the real nature still remains obscure. Improvements in the diagnosis of fetal anemia, laboratory and intrauterine transfusion techniques, and the implementation of prenatal and postnatal neuroprotection give some hope for the better outcome in the most severe cases. Unfortunately, obstetricians' awareness of the massive FMH remains still at an unacceptably low level. Summary: There is an urgent need for the internationally accepted definition, standardized pregnancy management protocol, and structured follow-up of neonates from such pregnancies. We suggest the international registry of massive FMH cases.

Database: EMBASE

5. The contribution of massive fetomaternal hemorrhage to antepartum stillbirth: a 25-year cross-sectional study.

Author(s): O'Leary, Bobby D; Walsh, Colin A; Fitzgerald, Joan M; Downey, Paul; McAuliffe, Fionnuala M

Source: Acta obstetricia et gynecologica Scandinavica; Dec 2015; vol. 94 (no. 12); p. 1354-1358

Publication Date: Dec 2015

Publication Type(s): Journal Article

Available in full text at Acta Obstetricia et Gynecologica Scandinavica - from John Wiley and Sons

Abstract:INTRODUCTION Fatal antepartum fetomaternal hemorrhage is a relatively uncommon clinical presentation, though one that appears quickly and without warning. The pathophysiology of this disease is unclear, and the incidence does not appear to be decreasing in line with overall antepartum mortality. This study was undertaken to analyse trends in antepartum fetal death from fetomaternal hemorrhage over a 25-year period in a single maternity hospital in Dublin, Ireland.MATERIAL AND METHODSA cross-sectional study of 192 132 nonanomalous infants weighing 500 g or more, delivered in a single tertiary-referral university institution between 1987 and 2011. Data was compared using Fisher's exact test, univariate analysis, and Cuzick's test for trend.RESULTSThere was no decrease in the rate of fatal fetomaternal hemorrhage over the past 25 years (p = 0.29), despite a decline in overall antepartum deaths (p = 0.0049). Fetomaternal hemorrhage accounted for 4.1% (34/828) of antepartum stillbirths. A higher proportion of these stillbirths occurred at term gestations (74%; 25/34) compared with other causes (40%; 321/794; p = 0.0003). Female infants were statistically more likely to be involved than males [odds ratio (OR) 2.33, 95% confidence interval (CI) 1.08-5.47, p = 0.02). Multiple gestations were up to six times as likely to

be affected as singleton pregnancies (OR 6.52, 95% CI 1.67-18.50, p = 0.005).CONCLUSIONSOver the past 25 years there has been no reduction in rates of fatal fetomaternal hemorrhage. Female infants and multiple gestations remain at higher risk of antepartum death from fatal fetomaternal hemorrhage.

Database: Medline

6. Autopsy of a markedly pale stillborn fetus and placenta: Advantages and limitations of laboratory techniques used in fetomaternal hemorrhage

Author(s): Kashireddy P.; Lewis N.; Poropatich K.; Ernst L.

Source: American Journal of Clinical Pathology; Oct 2015; vol. 144

Publication Date: Oct 2015

Publication Type(s): Conference Abstract

Available in full text at American Journal of Clinical Pathology - from Free Access Content

Available in full text at American Journal of Clinical Pathology - from ProQuest

Available in full text at American Journal of Clinical Pathology - from Oxford University Press ; Collection notes: To access please select Login with Athens and search and select NHS England as your institution before entering your NHS OpenAthens account details.

Abstract: The incidence of fetomaternal hemorrhage (FMH) is estimated at three in 1,000 births. The pathologic features of massive FMH need more attention because of this increased frequency. Clinically significant FMH is generally thought to occur when at least 30 mL of fetal RBCs pass into the maternal circulation. This level of hemorrhage can have significant effects, such as maternal Rh sensitization and severe fetal anemia, which can lead to fetal hydrops, stillbirth or neonatal death. An autopsy was performed on a 36.4-week stillborn fetus of a 27-year-old G2P1010 mother who had a normal prenatal history. After the mother noticed 2 days of decreased kicking, a diagnosis of intrauterine fetal demise was made. After delivery, an autopsy revealed a markedly pale macerated fetus, absent intravascular blood, positive Kleihauer-Betke (KB) acid elution test with an estimated fetal bleed of 345 mL (6.9% fetal cells detected in maternal blood), representing nearly the entire blood volume of the fetus. Placental examination revealed markedly pale pink parenchyma involving the entire placenta with multiple intervillous thrombi, patchy villous edema and a markedly increased number of nucleated erythrocytes in the fetal vasculature. The presenting signs and symptoms of FMH are often nonspecific and typically without a precipitating event. Diagnosis therefore relies on identification of fetal RBCs in maternal blood by laboratory techniques. Quantification of fetal RBCs helps to assess the extent of hemorrhage and to determine the therapeutic Rh-immune globulin dose required to prevent Rh sensitization. The KB acid elution test is the current standard laboratory test used to quantify fetal RBCs in maternal blood. Although it is relatively inexpensive, it is labor-intensive and has its own limitations. Flow cytometry is another test used to quantify fetal RBCs in maternal blood and is currently approved by the FDA. There are many advantages of this method over the KB test.

Database: EMBASE

7. Massive fetomaternal transfusion as a cause of early neonatal death after a car accident: A case report

Author(s): Diaz Cabrera R.; Chacon Aguilar R.; Navarro Moron J.; Rios Hurtado J.; Ruiz Moreno J.A.; Alvarez Aldean J.

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

Publication Date: Oct 2015

Publication Type(s): Conference Abstract

Abstract: Introduction Massive fetomaternal-transfusion (FMT) is a rare entity with high fetal morbimortality. Clinical manifestations vary depending on the volume and speed of onset of anaemia. The diagnosis is made by detecting fetal haemoglobin in maternal blood. In most cases the etiology is unknown. We report the case of a term newborn affected by severe anaemia by massive FMT after a car accident with maternal abdominal trauma causing early neonatal death. Case report A nulliparous 26-years-old woman with no toxic habits and history of allergy to metamizol and appendectomy. A positive blood-group. She is transferred to our emergency department at 38-weeks-of-gestational-age after suffering a car accident with front collision resulting in a slighty bruised right knee. She complains of pain in the right rib and abdominal region. Gestation is well controlled, blood test and ultrasound studies are normal. The fetus is in longitudinal position, cephalic presentation and full bag. Cardiotocographic (CTG) registration shows a decrease of variability and atypical variable decelerations. Doppler ultrasound (umbilical artery) shows an atypical pattern. An emergency caesarean section is indicated by risk of loss of fetal wellbeing which obtains a newbornboy of 2,480g (5th-percentile), A positive blood-group and Apgar 3/1, with marked mucocutaneous palleness, generalized hypotonia, severe bradycardia and poor respiratory effort, unresponsive to advanced cardiopulmonary resuscitation with early death outcome. Analytical shows severe anaemia (Hb:2,3g/dl) and metabolic acidosis (pHa/v:6.98/7.13). Cerebral and abdominal ultrasound are normal without any signs of bleeding. Clinical suspicion of massive-FMT is confirmed by Kleihauer- Betke test which detected 5.2% of fetal haemoglobin in maternal blood sample. The pathology report shows a term placenta with slightly decreased weight and size, microscopic infarction focus and bleeding focus. Discussion The massive loss of FMT is more than 80-150 ml (approximately 50% of fetal-blood-volume), with an incidence:1/1,000-4,000-pregnancies. The cause is usually unknown, some cases respond to invasive procedures (amniocentesis) and certain obstetric events (placental abruption, maternal abdominal trauma). The guiding clinical signs of FMT are decreased or absent fetal movements, the presence of a sinusoidal pattern in the CTG-registration, fetal atrial fibrillation, intrauterine growth retardation, fetal hydrops, fetal anemia or fetal death. Our case presents intrauterine growth retardation and severe anaemia. The Kleihauer-Betke test is the standard method to detect FMT (positive>0.1%, mass FMT>5%). Diagnostic confirmation is also performed by pathological examination of the placenta showing focus of bleeding. The risk of recurrence in subsequent pregnancies represents a criteria for obstetric follow up in this mothers.

Database: EMBASE

8. Fetomaternal hemorrhage (FMH), an update: review of literature and an illustrative case.

Author(s): Maier, Josefine Theresia; Schalinski, E; Schneider, W; Gottschalk, U; Hellmeyer, L

Source: Archives of gynecology and obstetrics; Sep 2015; vol. 292 (no. 3); p. 595-602

Publication Date: Sep 2015

Publication Type(s): Journal Article Review

Available in full text at Archives of Gynecology and Obstetrics - from Springer Link Journals

Abstract:BACKGROUN DBlood trafficking from fetus to mother and vice versa is a well-known physiological event that occurs at any stage in pregnancy. If the fetus looses high blood quantities to the maternal blood stream it becomes symptomatic. These symptoms can vary from cardiovascular distress to fetal death. MATERIALS AND METHODSWe give a review of current literature on Fetomaternal hemorrhage (FMH).CONCLUSION This article highlights the importance of physician's awareness on detecting this rare but life threatening entity with both severe consequences for mother and neonate. The traditional measurement of FMH and the co-usage of alpha-fetoprotein are debated. To conclude we describe and discuss an illustrative case of FMH. This article gives an applicatory overview of symptoms, diagnostics and treatment of FMH to facilitate physicians to detect this disease precociously.

Database: Medline

9. Massive idiopathic feto-maternal transfusion associated with dilatation of umbilical vein: Case report and review of literature

Author(s): Madu A.E.

Source: Journal of Maternal-Fetal and Neonatal Medicine; Jul 2013; vol. 26 (no. 11); p. 1076-1081

Publication Date: Jul 2013

Publication Type(s): Review

Abstract: Feto-maternal transfusion (FMT) or haemorrhage occurs when there is an entry of fetal blood into the maternal circulation in pregnancy or during delivery. It has been stated that very small amount of fetal red cells are normally detectable in maternal circulation in all pregnancies. However, massive FMT is rare and even rarer is the resultant severe anaemia which may cause severe fetal morbidity or early neonatal death in apparently uneventful normal pregnancy. Massive FMT is regarded as a pathological condition with a variety of clinical presentations essentially secondary to the fetal anaemia. We present a case of FMT associated with umbilical vein dilation and speculate whether this finding is of prognostic value. © 2013 Informa UK Ltd.

Database: EMBASE

10. Fetal-maternal hemorrhage: a case and literature review.

Author(s): Solomonia, Nino; Playforth, Karen; Reynolds, Eric W

Source: AJP reports; Nov 2012; vol. 2 (no. 1); p. 7-14

Publication Date: Nov 2012

Publication Type(s): Journal Article

Available in full text at AJP Reports - from National Library of Medicine

Abstract: Nearly all pregnancies include an insignificant hemorrhage of fetal blood into the maternal circulation. In some cases, the hemorrhage is large enough to compromise the fetus, resulting in fetal demise, stillbirth, or delivery of a severely anemic infant. Unfortunately, the symptoms of a significant fetal-maternal hemorrhage can be subtle, nonspecific, and difficult to identify at the time of the event. We present the case of a severely anemic newborn who was delivered in our facility with an extensive literature review.

Database: Medline

11. Idiopathic, asymptomatic fetomaternal haemorrhage causing fetal death.

Author(s): Sinha, B; Giles, R W H G; Pathak, S

Source: Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Jan 2012; vol. 32 (no. 1); p. 95-96

Publication Date: Jan 2012

Publication Type(s): Case Reports Journal Article

Database: Medline

12. Severe pre-eclampsia and HELLP syndrome after massive fetomaternal hemorrhage following blunt abdominal trauma

Author(s): Faber V.J.; Van Wijngaarden W.J.; Klumper F.J.; Scherjon S.

Source: Pregnancy Hypertension; 2011; vol. 1 (no. 3); p. 197-199

Publication Date: 2011

Publication Type(s): Article

Abstract: Severe pre-eclampsia and HELLP syndrome developed within 24 h after a 31 year old nulliparous woman suffered a blunt abdominal trauma with massive fetomaternal hemorrhage and fetal intracranial bleeding. This is the first case reported of fulminating pre-eclampsia and HELLP syndrome following maternal exposure to a large amount of fetal cells and/or fetal cell debris as DNA or microparticles.

Database: EMBASE

13. Fetomaternal transfusion after amniocentesis and cordocentesis

Author(s): Sikovanyecz J.; Pasztor N.; Kereszturi A.; Pal A.; Horvath E.; Szabo J.

Source: Irish Journal of Medical Science; Sep 2011; vol. 180 (no. 3); p. 697-701

Publication Date: Sep 2011

Publication Type(s): Article

Available in full text at Irish Journal of Medical Science - from Springer Link Journals

Abstract: Objective: To compare the extent of fetomaternal transfusion after amniocentesis and cordocentesis. Setting: Three-hundred and forty-five amniocentesis and 268 cordocentesis were performed for genetic indications. The extent of fetomaternal transfusion was calculated on the basis of the maternal serum alpha-fetoprotein level changes. Results: The mean fetomaternal transfusion was 6.3 and 62 muL in the amniocentesis and cordocentesis groups, respectively. Transplacental needle passage and longer procedural time were risk factors for fetomaternal transfusion. The frequency of transplacental passage was higher and the procedural time was longer in the cordocentesis group. The fetal loss rate was 1.17% after amniocentesis and 1.2% after cordocentesis, respectively. Conclusions: Cordocentesis causes more injury to the extrafetal compartment, which results in a higher level of fetomaternal transfusion. However, though a nearly ten times higher fetomaternal transfusion was observed after cordocentesis, there was no essential difference in pregnancy outcome between the two groups. © 2010 Royal Academy of Medicine in Ireland.

Database: EMBASE

14. Significance of the volume of fetomaternal hemorrhage after performing prenatal invasive tests

Author(s): Subira D.; Castanon S.; Gonzalo R.; Roman A.; Uriel M.; Serrano C.; Illan J.; Plaza J.

Source: Cytometry Part B - Clinical Cytometry; Jan 2011 (no. 1); p. 38-42

Publication Date: Jan 2011

Publication Type(s): Article

Available in full text at Cytometry Part B: Clinical Cytometry - from Wiley-Blackwell Free Backfiles NHS

Available in full text at Cytometry Part B: Clinical Cytometry - from John Wiley and Sons

Abstract: Background: Fetal erythrocytes cross the placenta during gestation, but invasive prenatal procedures might develop into fetomaternal hemorrhage (FMH). We examine whether flow cytometry immunophenotyping might be useful for measuring the volume of FMH after such procedures. Methods: Fetal erythrocytes (%) were determined in 153 pregnant women after amniocentesis (129) and chorionic villous sampling (24) using a monoclonal antibody against fetal hemoglobin. Fetal erythrocytes were identified for their high expression of fetal hemoglobin (HbF ++). Blood samples from two control groups, 53 healthy males and 21 pregnant women not submitted to invasive tests, were used to establish normal values of circulating HbF ++ erythrocytes in adults. Results: The highest percentage of HbF ++ erythrocytes in the control groups was 0.015%. The rate of HbF ++ erythrocytes in samples after invasive tests ranged between 1 ml of FMH (volume of packed cells corresponding to 0.054-0.15% HbF ++ erythrocytes), but only two had sonographic evidence of bleeding. Conclusions: Most women in our series had a very low volume of FMH after the invasive tests. Acute bleeding should be thoroughly investigated in women with either more than 1 ml of packed cells or more than 0.05% of HbF ++ erythrocytes. Intermediate values between >0.015% and <0.05%, should be carefully considered depending on the week of gestation. Data

obtained before 15 weeks might reflect previous cell trafficking between fetus and mother instead of acute hemorrhage. © 2010 International Clinical Cytometry Society.

Database: EMBASE

15. Intraplacental choriocarcinoma with fetomaternal transfusion

Author(s): Saito F.; Miyahara Y.; Tashiro H.; Ohba T.; Katabuchi H.

Source: Placenta; Sep 2010; vol. 31 (no. 9)

Publication Date: Sep 2010

Publication Type(s): Conference Abstract

Abstract: Intraplacental choriocarcinoma is rare and is usually identified only after detection of maternal and neonatal metastatic disease.We describe a case of fetomaternal transfusion caused by intraplacental choriocarcinoma that was histopathologically identified after birth. A 25-year-old woman, gravida 0, gave birth to a 2360-g female infant at term pregnancy via an emergency cesarean section because of non-reassuring fetal status. The Apgar score of the infantwas 7 and 8 at 1 and 5 min, respectively. She was pale and her hemoglobin concentrationwas 3.8 g/dL. The percentage of maternal hemoglobin F was very high (7.9%), and therefore, she was diagnosed with fetomaternal transfusion. To clarify the cause of fetomaternal transfusion, a histopathological examination of the placenta was performed, which confirmed the diagnosis of intraplacental choriocarcinoma. The mother was simultaneously examined because of the risk of widespread disease. Chest X-ray, whole body CT scan, and pelvic MRI revealed no metastatic lesion, and serum levels of hCG dropped adequately after delivery. Since no signs of metastasis were observed, the mother was not treated with chemotherapy. Twelve months postpartum, both the mother and child are doing well without any signs of malignant disease. The present case indicates that the incidence of intraplacental choriocarcinoma may be higher than that previously estimated. Therefore, we suggest that the placenta should be examined in any suspected cases of fetomaternal transfusion.

Database: EMBASE

16. Fetomaternal hemorrhage

Author(s): Wylie B.J.; D'Alton M.E.

Source: Obstetrics and Gynecology; May 2010; vol. 115 (no. 5); p. 1039-1051

Publication Date: May 2010

Publication Type(s): Review

Available in print at Patricia Bowen Library and Knowledge Service West Middlesex university Hospital - from Obstetrics and Gynecology

Available in full text at Obstetrics and Gynecology - from Ovid

Abstract: Fetomaternal hemorrhage refers to the entry of fetal blood into the maternal circulation before or during delivery. Antenatal fetomaternal hemorrhage is a pathological condition with a wide spectrum of clinical variation. Secondary to the resultant anemia, fetomaternal hemorrhage may have devastating consequences for the fetus such as neurologic injury, stillbirth, or neonatal death. Presentation is frequently without an evident precipitating factor. Recognition may become apparent only after injury has occurred, if at all. The most common antenatal presentation is decreased fetal activity and a heightened index of suspicion is warranted in cases of persistent maternal perception of decreased fetal movements. The diagnostic standard, the Kleihauer-Betke screen, has several limitations. Management remains challenging. When detected antenatally, cordocentesis with intrauterine transfusion may be attempted to correct the anemia; however,

repeat intrauterine transfusion or delivery may be necessitated to correct ongoing bleeding. Although the occurrence of large antenatal fetomaternal hemorrhage is fortunately rare, this entity likely remains underreported and underrecognized. A national registry should be created to advance our learning across institutions by reviewing the clinical presentations of fetomaternal hemorrhage, the variety of fetal heart rate tracings observed, the management strategies undertaken, and the outcomes achieved.

Database: EMBASE

17. Prenatal findings in a case of massive fetomaternal hemorrhage associated with intraplacental choriocarcinoma.

Author(s): Aso, Kaai; Tsukimori, Kiyomi; Yumoto, Yasuo; Hojo, Satoshi; Fukushima, Kotaro; Koga, Takaomi; Sueishi, Katsuo; Takahata, Yasushi; Hara, Toshiro; Wake, Norio

Source: Fetal diagnosis and therapy; 2009; vol. 25 (no. 1); p. 158-162

Publication Date: 2009

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

Available in full text at Fetal Diagnosis and Therapy - from ProQuest

Abstract: We describe biochemical assessment of maternal circulation in a case of massive fetomaternal hemorrhage at term associated with intraplacental choriocarcinoma. Markedly elevated maternal serum hCG level at 37 weeks of gestation suggested choriocarcinoma as a cause of fetomaternal hemorrhage in this case. Measurement of maternal hCG may be a useful parameter when intraplacental choriocarcinoma is in the differential diagnosis. In addition, the placenta should be examined in all cases of fetomaternal hemorrhage.

Database: Medline

18. Evidence of maternal-fetal transmission of Parachlamydia acanthamoebae

Author(s): Baud D.; Goy G.; Greub G.; Gerber S.; Vial Y.; Hohlfeld P.

Source: Emerging Infectious Diseases; Jan 2009; vol. 15 (no. 1); p. 120-121

Publication Date: Jan 2009

Publication Type(s): Letter

Available in full text at Emerging Infectious Diseases - from National Library of Medicine

Available in full text at Emerging Infectious Diseases - from Free Access Content

Database: EMBASE

19. Intraplacental choriocarcinoma with fetomaternal hemorrhage: a case study and literature review.

Author(s): Takahashi, Hironori; Matsuda, Hideo; Mizumoto, Yoshifumi; Furuya, Kenichi

Source: Journal of perinatal medicine; 2008; vol. 36 (no. 2); p. 178-181

Publication Date: 2008

Publication Type(s): Letter Case Reports

Database: Medline

20. Intraplacental choriocarcinoma as an unexpected cause of intrauterine death at term

Author(s): Nagel H.T.; Vandenbussche F.P.; Smit V.T.; Wasser M.N.; Peters A.A.

Source: International Journal of Gynecological Cancer; 2007; vol. 17 (no. 6); p. 1337-1339

Publication Date: 2007

Publication Type(s): Article

Available in full text at International Journal of Gynecological Cancer - from Ovid

Abstract: Intraplacental choriocarcinoma is rare. It can cause fetal death at term by fetomaternal hemorrhage. We present a case of intraplacental choriocarcinoma. After a hydatidiform mole with persistence of throphoblastic disease, the patient delivered a stillborn baby at term. Massive fetomaternal hemorrhage was the unexpected cause of death. Choriocarcinoma was only diagnosed after pathologic revision of the placenta because of persistent high levels of serum hCG (human chorionic gonadotropin). Massive fetomaternal hemorrhage should alert the obstetrician and the pathologist to the possibility of choriocarcinoma arising from the placenta. © 2007, Copyright the Authors.

Database: EMBASE

21. Fetomaternal hemorrhage in relation to chorionic villus sampling revisited

Author(s): Pelikan D.M.; Kanhai H.H.; De Groot-Swings G.M.; Scherjon S.A.; Mesker W.E.; Tanke H.J.

Source: Prenatal Diagnosis; Mar 2006; vol. 26 (no. 3); p. 201-205

Publication Date: Mar 2006

Publication Type(s): Article

Available in full text at Prenatal Diagnosis - from John Wiley and Sons

Abstract: Objective: To investigate whether chorionic villus sampling (CVS) results in a proportional increase of alpha-fetoprotein (AFP) and fetal red cells in maternal blood. Methods: Blood samples were collected before and after CVS. The AFP concentration was measured and supervised automated microscopy of Kleihauer-Betke slides was applied to quantify fetal red cells. Results: AFP analysis was performed in 53 paired samples and automated microscopic scanning in 59 paired samples. Median AFP concentrations before and after CVS were 12.0 mug/L (range 6.4-36.4) and 18.7 mug/L (range 8.2-668.9), respectively, indicating a significant increase ($p < 0.0001$). Median numbers of fetal red cells detected before and after CVS were 0 (range 0-36) and 0 (range 0-31), respectively. No significant increase of fetal cells was observed ($p = 0.72$). The delta (DELTA) fetal red cells and the DELTA AFP correlated poorly ($p = -0.22$, $p = 0.11$). The amount of villi correlated moderately with the DELTA AFP ($p = 0.32$, $p = 0.02$) and did not correlate with the DELTA fetal red cells ($p = -0.11$, $p = 0.43$). Conclusions: Although the AFP concentration after CVS increased, no increase of fetal red cells was detected. These findings suggest that CVS results in a leakage of

proteins due to placental tissue damage, rather than increased trafficking of fetal cells. Copyright © 2006 John Wiley & Sons, Ltd.

Database: EMBASE

22. Fetomaternal hemorrhage caused by intraplacental choriocarcinoma: A case report and review of literature in Japan

Author(s): Koike Y.; Wakamatsu H.; Kuroki Y.; Isozaki A.; Ishii S.; Fujitsuka S.

Source: American Journal of Perinatology; Jan 2006; vol. 23 (no. 1); p. 49-52

Publication Date: Jan 2006

Publication Type(s): Review

Abstract: Fetomaternal hemorrhage induced by intraplacental choriocarcinoma is considered to be extremely rare. We herein describe a neonate with severe anemia caused by intraplacental choriocarcinoma that was histopathologically identified after birth. Furthermore, we reviewed three other such cases in Japan. As a result, the incidence of intraplacental choriocarcinoma may be higher than previously estimated. Therefore, we suggest that the placenta should be examined in any suspected cases of fetomaternal hemorrhage. Copyright © 2006 by Thieme Medical Publishers, Inc.

Database: EMBASE

23. Massive feto-maternal hemorrhage: an early presentation of women with gestational choriocarcinoma.

Author(s): Lam, Chui M; Wong, Shell F; Lee, Kai W; Ho, Lau C; Yu, Vivian S-Y

Source: Acta obstetricia et gynecologica Scandinavica; Jun 2002; vol. 81 (no. 6); p. 573-576

Publication Date: Jun 2002

Publication Type(s): Case Reports Journal Article Review

Available in full text at Acta Obstetricia et Gynecologica Scandinavica - from John Wiley and Sons

Database: Medline

24. Infantile choriocarcinoma with idiopathic massive fetomaternal hemorrhage.

Author(s): Chou, Hung-Chieh; Chen, Rong-Long; Yau, Kuo-Inn Tsou; Huang, Shiu-Fen; Ni, Yen-Hsuan; Tang, Jen-Ruey

Source: Medical and pediatric oncology; Mar 2002; vol. 38 (no. 3); p. 203-204

Publication Date: Mar 2002

Publication Type(s): Case Reports Journal Article

Available in full text at Medical and Pediatric Oncology - from John Wiley and Sons

Database: Medline

25. Intraplacental choriocarcinoma with fetomaternal transfusion.

Author(s): Takai, N; Miyazaki, T; Yoshimatsu, J; Moriuchi, A; Miyakawa, I

Source: Pathology international; Mar 2000; vol. 50 (no. 3); p. 258-261

Publication Date: Mar 2000

Publication Type(s): Journal Article

Available in full text at Pathology International - from John Wiley and Sons

Abstract: Intraplacental choriocarcinoma is very rare, and is usually found only after maternal and fetal metastatic disease is identified. The purpose of this case report is to review the incidence and findings of intraplacental choriocarcinoma. A term placenta was investigated because the newborn was born with severe anemia (Hb 3.0 g/dL). A 2 cm nodule was noted on the surface of the amniotic membrane and grossly resembled an infarction. The tumor was examined microscopically with immunohistochemical staining for the alpha- and beta-human chorionic gonadotropin (alpha-hCG, beta-hCG) subunits, human placental lactogen (hPL) and Ki-67. Microscopically, the tumor consisted of necrotic areas with proliferation of atypical trophoblastic cells and destruction of the villi and capillaries. The cells were positive for the alpha-hCG, beta-hCG subunits, hPL and Ki-67, consistent with intraplacental choriocarcinoma. The mother and newborn were investigated for the presence of metastatic disease. Computed tomography scans and magnetic resonance imaging of the mother and infant were negative for metastatic disease. Choriocarcinoma, limited only to the placenta with no evidence of metastatic disease is very rare. Primary intraplacental choriocarcinoma may frequently be overlooked or missed, and choriocarcinoma may possibly arise in the placenta more often than in retained or persistent trophoblast following pregnancy.

Database: Medline

26. Massive fetomaternal hemorrhage and fetal death: are they predictable?

Author(s): Samadi R.; Greenspoon J.S.; Gviazda I.; Settlage R.H.; Goodwin T.M.

Source: Journal of perinatology : official journal of the California Perinatal Association; 1999; vol. 19 (no. 3); p. 227-229

Publication Date: 1999

Publication Type(s): Article

Available in full text at Journal of Perinatology - from Nature Publishing Group

Abstract:OBJECTIVE: To report the incidence of massive fetomaternal hemorrhage (FMH) associated with fetal death and to test the hypothesis that FMH is more likely to occur in those with risk factors for FMH. STUDY DESIGN: All cases of fetal death of infants weighing > 500 gm between January 1, 1990 and December 31, 1994 were reviewed for evidence of massive FMH (> or = 2% fetal cells in the maternal circulation as measured by the Betke-Kleihauer test). Women with risk factors were compared with those without risk factors with respect to the occurrence of massive FMH. RESULTS: The prevalence of massive FMH was 14 of 319 (4.4%) cases, occurring in 4 of 102 (3.9%) of those with risk factors and 10 of 217 (4.6%) of patients without risk factors (p = 0.78). Otherwise unexplained fetal death was associated with massive FMH in 5 of 141 (3.5%). Major fetal anomalies were present in 5 of 14 (35.7%) cases of massive FMH. CONCLUSION: Clinical risk factors do not predict an increased likelihood of massive FMH. Massive FMH is associated with fetal anomalies. Betke-Kleihauer testing should be performed in all cases of fetal death, including those with anomalies regardless of the presence or absence of risk factors for FMH.

Database: EMBASE

27. Fetomaternal hemorrhage after midtrimester genetic amniocentesis at King Chulalongkorn Memorial Hospital

Author(s): Tannirandorn Y.; Romayanan O.

Source: Journal of the Medical Association of Thailand = Chotmaihet thangphaet; Nov 1999; vol. 82 (no. 11); p. 1089-1093

Publication Date: Nov 1999

Publication Type(s): Article

Abstract: Midtrimester genetic amniocentesis has become an accepted part of modern obstetric care. Although its accuracy is well established, the risk of fetomaternal hemorrhage remains controversial. This prospective study was conducted to determine how effective continuous ultrasound guided amniocentesis is in preventing fetomaternal hemorrhage. The authors investigated 30 patients undergoing midtrimester genetic amniocentesis at our institution. Amniocentesis was performed under continuous real-time ultrasound guidance using a 21-gauge, 3.5-inch long spinal needle. Maternal serum alpha-fetoprotein (AFP) levels were determined before, at 5 minutes and at 1 hour after amniocentesis. There were no significant changes in maternal serum AFP levels either at 5 minutes or at 1 hour after amniocentesis. Midtrimester genetic amniocentesis performed by a trained and experienced operator under continuous ultrasound guidance does not significantly increase the risk of fetomaternal hemorrhage after the procedure.

Database: EMBASE

28. A case of massive fetomaternal haemorrhage at term associated with choriocarcinoma.

Author(s): Lee, K W; Ho, L C

Source: The Australian & New Zealand journal of obstetrics & gynaecology; May 1999; vol. 39 (no. 2); p. 274-276

Publication Date: May 1999

Publication Type(s): Case Reports Journal Article

Available in full text at Australian and New Zealand Journal of Obstetrics and Gynaecology - from John Wiley and Sons

Available in print at Patricia Bowen Library and Knowledge Service West Middlesex university Hospital - from Australian and New Zealand Journal of Obstetrics and Gynaecology

Available in full text at Australian and New Zealand Journal of Obstetrics and Gynaecology - from John Wiley and Sons

Database: Medline

29. Placental pathology casebook. Choriocarcinoma in situ of placenta associated with transplacental hemorrhage.

Author(s): Suh, Y K

Source: Journal of perinatology : official journal of the California Perinatal Association; Mar 1999; vol. 19 (no. 2); p. 153-154

Publication Date: Mar 1999

Publication Type(s): Case Reports Journal Article

Available in full text at Journal of Perinatology - from Nature Publishing Group

Database: Medline

30. Fetomaternal haemorrhage and prenatal intracranial bleeding: Two more causes of blueberry muffin baby

Author(s): Smets K.; Van Aken S.

Source: European Journal of Pediatrics; 1998; vol. 157 (no. 11); p. 932-934

Publication Date: 1998

Publication Type(s): Article

Available in full text at European Journal of Pediatrics - from Springer Link Journals

Abstract: Blueberry muffin lesions are associated with prenatal infections, severe and chronic anemia and neoplastic infiltrative diseases. In the first two instances they represent postnatal re-expression of cutaneous haematopoiesis, in the latter they are cutaneous localizations of a neoplastic disease. Chronic prenatal anaemia leading to blueberry muffin lesions in the neonate has been reported in association with severe haemolytic anaemia such as congenital spherocytosis, Rhesus haemolytic disease and ABO incompatibility, or in anaemia caused by twin-to-twin transfusion. We present two more causes of prenatal anaemia leading to blueberry muffin lesions: chronic fetomaternal haemorrhage and severe intracranial bleeding. Conclusion In any blueberry muffin baby with profound anaemia, chronic fetomaternal haemorrhage and severe internal bleeding should be included in the differential diagnosis. Skin biopsy must be performed to rule out neoplastic infiltrative diseases.

Database: EMBASE

31. Fetomaternal haemorrhage discovered after trauma and treated by fetal intravascular transfusion

Author(s): Lipitz S.; Achiron R.; Horoshovski D.; Schiff E.; Rotstein Z.; Sherman D.

Source: European Journal of Obstetrics Gynecology and Reproductive Biology; Jan 1997; vol. 71 (no. 1); p. 21-22

Publication Date: Jan 1997

Publication Type(s): Article

Abstract: Fetomaternal haemorrhage can occur spontaneously, or after abdominal trauma. We describe a case of fetomaternal haemorrhage diagnosed at 27 weeks gestation after blunt trauma. The Kleihauer-Betke smear on admission and during the first week was positive, ranging between 3% and 5%. Cordocentesis revealed a fetal haemoglobin of 8.8 gm/dl. An intravascular fetal transfusion was performed. The weeks until delivery and the neonatal period were unremarkable. Fetal anaemia can be a serious complication of fetomaternal haemorrhage, however, intravascular fetal transfusion is an effective treatment when this occurs. The Kleihauer-Betke test should be performed in every patient with a history of abdominal trauma during pregnancy.

Database: EMBASE

32. Relationship between acute fetal distress and maternal-placental-fetal circulations in severe preeclampsia.

Author(s): Yang, J M; Wang, K G

Source: Acta obstetricia et gynecologica Scandinavica; Jul 1995; vol. 74 (no. 6); p. 419-424

Publication Date: Jul 1995

Publication Type(s): Journal Article

Abstract:BACKGROUNDHypoxic complications are thought to be the result of vascular lesions in the maternal-placental or fetal-placental circulation, with a resultant decrease in blood flow. This study was designed 1) to explore what kind of pathophysiological changes occur in the maternal-placental-fetal circulations associated with acute fetal distress, and 2) to determine whether umbilical velocimetry can be used as a predictor of acute hypoxia in severe preeclampsia.METHODSEighty-nine cases of severe preeclampsia, who had Doppler ultrasonography, maternal blood chemistry and hematogram examinations all performed within two days of delivery or fetal death, were studied.RESULTSAccording to the absence or presence of acute fetal distress as determined by the fetal heart rate pattern, patients were divided into two groups: distress group and non-distress group. There was no significant difference between the two groups in maternal general status. However, patients in the distress group had a significantly shorter gestation age on admission and at delivery (p 95th centile) as a predictor of acute fetal compromise, judged by the incidence of abnormal fetal heart tracing mandating emergency delivery, 1-minute Apgar scores of less than 7, 5-minute Apgar scores of less than 7, and a pH value for the umbilical arterial blood of less than 7.2, had a sensitivity of 40.5-75%, specificity of 71.8-80%, positive predictive value of 12.5-75%, and negative predictive value of 64.5-98.4%.CONCLUSIONIn severe preeclampsia, early onset of disease superimposed with maternal hemoconcentration might initiate an acute insult and predispose the fetus to acute hypoxia.

Database: Medline

33. Fetomaternal haemorrhage treated with intravascular transfusion: A late complication of amniocentesis?

Author(s): Kohlenberg C.F.; Ellwood D.A.

Source: British Journal of Obstetrics and Gynaecology; 1994; vol. 101 (no. 10); p. 912-913

Publication Date: 1994

Publication Type(s): Article

Database: EMBASE

34. Transabdominal chorionic villus sampling in the second and third trimesters of pregnancy: chromosome quality, reporting time, and feto-maternal bleeding.

Author(s): Smidt-Jensen, S; Lundsteen, C; Lind, A M; Dinesen, K; Philip, J

Source: Prenatal diagnosis; Oct 1993; vol. 13 (no. 10); p. 957-969

Publication Date: Oct 1993

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

Abstract: Transabdominal chorionic villus sampling (TA-CVS) was performed in 210 pregnancies from 13 to 38 weeks using a double-needle technique. The sampling success was comparable to first-trimester TA-CVS and the diagnostic success rate was 98.2 per cent for the short-term technique and 99.3 per cent for cultured villi. Two fetuses could not be karyotyped. We found the chromosome quality to be similar to that in the first trimester, comparing the number of G-bands and other chromosome attributes. There were no unintended losses in a group (n = 142) with no sonographic abnormality, except for one death in utero at 38 weeks, 20 weeks after sampling. Chromosomal aberrations were seen in 19 per cent of cases with abnormal sonograms (n = 58). One cases of a discordant karyotype was found (false-negative prediction of Down's syndrome by the short-term preparation). There were no cases of fetal demise due to feto-maternal bleeding. It is suggested that double-needle TA-CVS in advanced pregnancies combines the advantages of rapid karyotyping of chromosomes of good quality and low risk for the fetus, and seems to be easier to practise and is probably safer than cordocentesis.

Database: Medline

35. Hemorrhagic endovasculitis of the placenta and fetomaternal hemorrhage: A relationship? [6]

Author(s): Owen J.; Novak P.M.; Sander C.M.; Yang S.S.; Van Oeyen P.T.

Source: American Journal of Obstetrics and Gynecology; 1992; vol. 167 (no. 3); p. 860-861

Publication Date: 1992

Publication Type(s): Letter

Database: EMBASE

36. Six cases of massive feto-maternal bleeding causing intra-uterine fetal death.

Author(s): Marions, L; Thomassen, P

Source: Acta obstetricia et gynecologica Scandinavica; 1991; vol. 70 (no. 1); p. 85-88

Publication Date: 1991

Publication Type(s): Case Reports Journal Article

Abstract: Six patients in whom intra-uterine fetal death (IUFD) near term resulted from massive feto-maternal hemorrhage are reported. Two of the mothers were Rh-negative, which necessitated the administration of large volumes of anti-D. In order to detect such patients, the Kleihauer-Betke test should be performed in all cases of IUFD of unknown etiology.

Database: Medline

37. Pregnancy outcome and fetomaternal hemorrhage after noncatastrophic trauma

Author(s): Goodwin T.M.; Breen M.T.

Source: American Journal of Obstetrics and Gynecology; 1990; vol. 162 (no. 3); p. 665-671

Publication Date: 1990

Publication Type(s): Article

Abstract: Two hundred five consecutive cases of noncatastrophic trauma occurring during the second half of pregnancy were evaluated prospectively. Pregnancy complications as a result of trauma occurred in 18 of 205 patients (8.8%): premature labor (n = 10), placental separation (n = 5), fetal injury (n = 1), and fetal death (n = 2). Multiple regression analysis of the data base showed obstetric findings (contractions, uterine tenderness, and bleeding) on presentation to be highly associated with complications (17/88; 19.3%). In their absence complications were rare (1/117; 0.9%). Detectable fetomaternal hemorrhage was significantly more common in trauma patients (18/205) than in control subjects (2/110) ($p < 0.01$), but its role in managing trauma patients was limited to detection of rare massive hemorrhage (1/205) and detection of rare hemorrhage exceeding that covered by the standard Rho (D) immune globulin dose (2/205). Fetomaternal hemorrhage need not be quantitated in patients who lack obstetric findings on presentation. Despite rare reports of delayed abruptio placentae, it is doubtful that prolonged observation (greater than 2 to 3 hours) in the hospital is necessary in patients who lack obstetric findings on initial presentation.

Database: EMBASE

38. Increased severity of fetal hemolytic disease with known rhesus alloimmunization after first-trimester transcervical chorionic villus biopsy.

Author(s): Moise, K J; Carpenter, R J

Source: Fetal diagnosis and therapy; 1990; vol. 5 (no. 2); p. 76-78

Publication Date: 1990

Publication Type(s): Case Reports Journal Article

Abstract: Fetomaternal hemorrhage secondary to chorionic villus biopsy has the potential to accelerate fetal hemolytic disease in the pregnant patient previously sensitized to red cell antigens. A case of poor fetal outcome after first-trimester transcervical chorionic villus sampling in an alloimmunized patient is reported. An increase in antibody titers was associated with the demise of a hydropic fetus early in the second trimester. Maternal red cell alloimmunization is suggested as an absolute contraindication for chorionic villus sampling performed for genetic indications.

Database: Medline

39. Diagnosis of feto-maternal haemorrhage after genetic amniocentesis

Author(s): Gigli C.; Leopardi A.; Casaccia R.; Fischer-Tamaro L.; Mandruzzato G.P.

Source: The Journal of nuclear medicine and allied sciences; 1989; vol. 33 (no. 3); p. 118-120

Publication Date: 1989

Publication Type(s): Article

Database: EMBASE

40. Chorioangioma placentae and feto-maternal transfusion; a report of two cases.

Author(s): Brandt, C A; Ryom, C; Grove, A

Source: European journal of obstetrics, gynecology, and reproductive biology; Oct 1989; vol. 33 (no. 1); p. 95-98

Publication Date: Oct 1989

Publication Type(s): Case Reports Journal Article

Abstract: Chorioangioma (CA) is found in about 1% of all placentas. Here we report cases of CA: one associated with intra-uterine fetal death, and the other with feto-maternal transfusion resulting in severe anaemia of the child. Feto-maternal transfusion through a CA could, in suspected cases, be diagnosed by s-AFP, one-minute alkali-denaturation test and perhaps ultrasound of the placenta. Intra-uterine death of the child could then be prevented by Caesarean section.

Database: Medline

41. Bleeding as a consequence of chorion villus sampling

Author(s): Liu D.T.; Jeavons B.; Preston C.; Slater E.; Symonds E.M.

Source: Asia-Oceania journal of obstetrics and gynaecology / AOFOG; Mar 1989; vol. 15 (no. 1); p. 1-5

Publication Date: Mar 1989

Publication Type(s): Article

Abstract:A series of 4 separate studies were conducted to assess the incidence and short term consequence of bleeding associated with chorion villus sampling. Results support previous reports that risk of foetal-maternal transfusion as suggested by a rise in maternal serum alpha-fetoprotein (MSAFP) can occur. This occurrence is not consistent and need not be obvious even after therapeutic abortion. It is also transient and did not complicate mid-trimester neural tube screening or subsequent course of pregnancy. Eighty-seven percent of blood contaminating villus samples are of maternal origin. Following diagnosis 37% of patients reported some vaginal bleeding. This is mainly in the form of spotting which did not preclude normal pregnancy. Foetal loss occurred in 4 of the patients when bleeding considered heavier than spotting continued. In rhesus negative patients prophylactic anti-D gamma-globulin is advised, since neither Kleihauer counts nor MSAFP estimation reliably detect all foetal-maternal transfusions.

Database: EMBASE

42. Transplacental hemorrhage associated with placental neoplasms.

Author(s): Santamaria, M; Benirschke, K; Carpenter, P M; Baldwin, V J; Pritchard, J A

Source: Pediatric pathology; 1987; vol. 7 (no. 5-6); p. 601-615

Publication Date: 1987

Publication Type(s): Case Reports Journal Article

Abstract: We report a case of choriocarcinoma in situ arising from a term placenta in an otherwise normal pregnancy that resulted in fetal hydrops and intrauterine fetal death from chronic fetal-maternal hemorrhage (FMH). The clinical and pathologic features are described and compared with the few similar cases reported and with an additional placental choriocarcinoma found in our files. We also describe the clinical and pathologic observations of two chorangiomas that caused massive FMH and led to fetal death.

Database: Medline

43. Feto-maternal haemorrhage associated with genetic amniocentesis: Results of a randomized trial

Author(s): Tabor A.; Bang J.; Norgaard-Pedersen B.

Source: British Journal of Obstetrics and Gynaecology; 1987; vol. 94 (no. 6); p. 528-534

Publication Date: 1987

Publication Type(s): Article

Abstract: Maternal serum alpha-fetoprotein (AFP) levels were determined before and after genetic amniocentesis (n = 283) or ultrasound scan (n = 268) in a group of women participating in a randomized trial of genetic amniocentesis. Increases in AFP levels were seen significantly more often after amniocentesis than after ultrasound scan (P 25 mug/l represents a feto-maternal haemorrhage (FMH) attributable to amniocentesis, the rate of amniocentesis-induced FMH was 17%. Such FMH was seen significantly more often after transplacental amniocentesis or after amniocentesis performed by less experienced operators. No association was detected between birthweight and FMH attributable to amniocentesis.

Database: EMBASE

44. Ultrasound diagnosis of abruptio placentae with fetomaternal hemorrhage

Author(s): Cardwell M.S.

Source: American journal of obstetrics and gynecology; Aug 1987; vol. 157 (no. 2); p. 358-359

Publication Date: Aug 1987

Publication Type(s): Article

Abstract: Fetomaternal hemorrhage and abruptio placentae may occur concurrently. A prospective study was done to determine the incidence of fetomaternal hemorrhage in noncatastrophic cases of abruptio placentae consistent with sonographic findings. Significant fetomaternal hemorrhage was found in 75% of noncatastrophic cases. Implications of conservative management of abruptio placentae with fetomaternal hemorrhage are discussed.

Database: EMBASE

45. Fetomaternal hemorrhage associated with umbilical vein thrombosis. Case report.

Author(s): Hoag, R W

Source: American journal of obstetrics and gynecology; Jun 1986; vol. 154 (no. 6); p. 1271-1274

Publication Date: Jun 1986

Publication Type(s): Case Reports Journal Article

Abstract: Antenatal thrombosis of the umbilical vein is usually a fatal condition for the fetus or neonate. The probable pathophysiology of this condition and its relationship to fetomaternal hemorrhage is discussed. A systematic study of the entire umbilical cord should be done when fetomaternal bleeding is diagnosed.

Database: Medline

46. Fetomaternal hemorrhage following trauma

Author(s): Rose P.G.; Strohm P.L.; Zuspan F.P.

Source: American Journal of Obstetrics and Gynecology; 1985; vol. 153 (no. 8); p. 844-847

Publication Date: 1985

Publication Type(s): Article

Abstract: Fetomaternal hemorrhage can result from different types of trauma and may be followed by fetal anemia, fetal death, or isoimmunization. We prospectively studied the frequency and volume of fetomaternal hemorrhage, fetal well-being, abruptio placentae, and fetal outcome in 32 pregnant patients suffering recent trauma. Fetomaternal hemorrhage occurred in nine of 32 trauma patients (28%) with a mean volume of 16 ml +/- 14.3 (SD). There was a statistically significant difference in the frequency and mean volume of fetomaternal hemorrhage in this group over that in gestational-age-matched controls. Neither the nature of the trauma nor the gestational age was related to the frequency or volume of fetomaternal hemorrhage. The outcome in three of the nine trauma patients who sustained fetomaternal hemorrhage was poor; fetal anemia, paroxysmal atrial tachycardia, and fetal death occurred in each one. Maternal trauma remains a significant cause of maternal and morbidity and death, and the use of the Kleihauer-Betke analysis is indicated to identify fetomaternal hemorrhage. Rh-immune globulin therapy should be given to Rh-negative patients with fetomaternal hemorrhage.

Database: EMBASE

47. Transplacental fetal hemorrhage after amniocentesis.

Author(s): Bowman, J M; Pollock, J M

Source: Obstetrics and gynecology; Dec 1985; vol. 66 (no. 6); p. 749-754

Publication Date: Dec 1985

Publication Type(s): Journal Article

Abstract:A retrospective survey of Winnipeg Rh laboratory data from January 1, 1981 to December 31, 1984 determined that, despite placental localization, 2.6% of 974 women having amniocenteses performed at 16 to 18 weeks' gestation for genetic reasons and 2.3% of 1215 women having amniocenteses performed between 32 and 38 weeks' gestation had fetal-maternal transplacental hemorrhages greater than or equal to 0.1 mL of fetal red cells due to placental trauma. In 1.6 and 1.8%, respectively, the fetal transplacental hemorrhages were greater than or equal to 1 mL. Four of 99 alloimmunized women undergoing 257 amniocenteses for determination of severity of fetal erythroblastosis had fetal transplacental hemorrhages all greater than 5 mL of fetal red cells. The 1.9% incidence of fetal transplacental hemorrhages after amniocentesis in alloimmunized women is 83% less than the 11.2% incidence that occurred in the authors' institution from February 1963 to December 1966. However, in three of the four women, there was a very rapid rise in Rh antibody titer and increased severity of Rh fetal disease. Only the alloimmunized woman who meets strict criteria, indicating that her fetus is at risk of fetal death, should be subjected to amniocentesis, and then only after careful placental localization by ultrasound. Because fetal transplacental hemorrhages occur after amniocentesis despite ultrasound placental localization, 300 micrograms of Rh immune globulin should be administered to all unimmunized Rh negative women after amniocentesis.

Database: Medline

48. Fetomaternal transfusion following trauma

Author(s): Bickers R.G.; Wennberg R.P.

Source: Obstetrics and Gynecology; 1983; vol. 61 (no. 2); p. 258-259

Publication Date: 1983

Publication Type(s): Article

Abstract: Massive fetomaternal transfusion was observed in an infant born at 35 weeks' gestation after abdominal trauma from an automobile accident. Fetomaternal hemorrhage is not often considered as a potential complication of trauma during pregnancy, but could be responsible for the delayed fetal death in some pregnant trauma victims.

Database: EMBASE

49. Fetal death due to extreme maternal Rh immune augmentation

Author(s): Stern K.

Source: Transfusion; 1982; vol. 22 (no. 3); p. 257-258

Publication Date: 1982

Publication Type(s): Letter

Database: EMBASE

50. Fetomaternal bleeding following diagnostic amniocentesis

Author(s): Lele A.S.; Carmody P.J.; Hurd M.E.; O'Leary J.A.

Source: Obstetrics and Gynecology; 1982; vol. 60 (no. 1); p. 60-64

Publication Date: 1982

Publication Type(s): Article

Abstract: The frequency of diagnostic amniocentesis is increasing. Fetal bleeding and trauma have long been recognized to be complications of amniocentesis. For detection of fetomaternal bleeding, efficacy of modified Kleihauer-Betke staining and alpha-fetoprotein elevation in maternal blood was assessed. Preamniocentesis ultrasound scanning was found useful in reducing the incidence of fetomaternal bleeding and bloody taps. Elevation of alpha-fetoprotein was found to be a more sensitive indicator of fetomaternal bleeding than was modified Kleihauer-Betke staining. The use of alpha-fetoprotein to detect fetomaternal bleeding associated with amniocentesis is suggested for the identification of Rh-negative patients requiring anti-D gamma-globulin to prevent sensitization.

Database: EMBASE

51. Massive fetomaternal hemorrhage due to choriocarcinoma of the uterus

Author(s): Blackburn G.K.

Source: Journal of Pediatrics; 1976; vol. 89 (no. 4); p. 680-681

Publication Date: 1976

Abstract: Acute fetomaternal hemorrhage at term due to choriocarcinoma in the mother is rare. However, in the presence of massive acute or chronic fetomaternal hemorrhage, especially in the presence of a large placenta or in the absence of obvious antecedent reasons, such as traumatic diagnostic amniocentesis or external cephalic version, choriocarcinoma should be looked for in the placenta and mother, and in the baby if found in the mother. The infant should have at least two HCG titers done one month apart. If the titer remains below 5 milli IU/ml, the baby is probably uninvolved.

Database: EMBASE

52. Amniotic fluid embolism

Author(s): Attwood H.D.

Source: Pathology annual; 1972; vol. 7 ; p. 145-172

Publication Date: 1972

Publication Type(s): Review

Database: EMBASE

53. Metastasis of maternal cancer to the placenta and fetus

Author(s): Potter J.F.; Schoeneman M.

Source: Cancer; Feb 1970; vol. 25 (no. 2); p. 380-388

Publication Date: Feb 1970

Publication Type(s): Article

Available in full text at Cancer - from Wiley-Blackwell Free Backfiles NHS

Available in full text at Cancer - from John Wiley and Sons

Database: EMBASE

Strategy 219685

#	Database	Search term	Results
1	Medline	(fetalmaternal ADJ2 haemorrhag*).ti,ab	3
2	Medline	(fetalmaternal ADJ2 hemorrhag*).ti,ab	53
3	Medline	("fetal maternal" ADJ2 hemorrhag*).ti,ab	62
4	Medline	("fetal maternal" ADJ2 haemorrhag*).ti,ab	4
5	Medline	("feto maternal" ADJ2 haemorrhag*).ti,ab	49
6	Medline	("feto maternal" ADJ2 hemorrhag*).ti,ab	52
7	Medline	("fetomaternal" ADJ2 hemorrhag*).ti,ab	355
8	Medline	("fetomaternal" ADJ2 haemorrhag*).ti,ab	123
9	Medline	exp "FETOMATERNAL TRANSFUSION"/	1176
10	Medline	(1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9)	1355
11	Medline	(anaemi* OR anemi*).ti,ab	131085
12	Medline	exp ANEMIA/	149783
13	Medline	(11 OR 12)	206588
14	Medline	((fetus OR fetal OR foetal) ADJ2 (death OR demise)).ti,ab	8048
15	Medline	exp "FETAL DEATH"/	27581
16	Medline	(14 OR 15)	31771

17	Medline	(10 AND 13 AND 16)	102
18	Medline	exp "FETOMATERNAL TRANSFUSION"/et	170
19	Medline	("amniotic fluid emboli*").ti,ab	902
20	Medline	exp "EMBOLISM, AMNIOTIC FLUID"/	1011
21	Medline	(19 OR 20)	1225
22	Medline	(10 AND 21)	2
23	EMBASE	(fetalmaternal ADJ2 haemorrhag*).ti,ab	1
24	EMBASE	(fetalmaternal ADJ2 hemorrhag*).ti,ab	0
25	EMBASE	("fetal maternal" ADJ2 hemorrhag*).ti,ab	79
26	EMBASE	("fetal maternal" ADJ2 haemorrhag*).ti,ab	8
27	EMBASE	("feto maternal" ADJ2 haemorrhag*).ti,ab	70
28	EMBASE	("feto maternal" ADJ2 hemorrhag*).ti,ab	67
29	EMBASE	("fetomaternal" ADJ2 hemorrhag*).ti,ab	382
30	EMBASE	("fetomaternal" ADJ2 haemorrhag*).ti,ab	127
31	EMBASE	exp "FETOMATERNAL TRANSFUSION"/	12356
32	EMBASE	(23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31)	12584
33	EMBASE	("amniotic fluid emboli*").ti,ab	1033
34	EMBASE	exp "EMBOLISM, AMNIOTIC	1491

		FLUID"/	
35	EMBASE	(33 OR 34)	1612
36	EMBASE	(32 AND 35)	10
37	EMBASE	exp "FETUS DEATH"/	35657
38	EMBASE	((fetus OR fetal OR foetal) ADJ2 (death OR demise)).ti,ab	10181
39	EMBASE	(37 OR 38)	39467
40	EMBASE	(32 AND 39)	619
41	EMBASE	*"FETOMATERNAL TRANSFUSION"/et	64
42	EMBASE	*"FETOMATERNAL TRANSFUSION"/	4477
43	EMBASE	(39 AND 42)	176
44	Medline	*"FETOMATERNAL TRANSFUSION"/	798
45	Medline	(16 AND 44)	67
46	Medline	exp CHORIOCARCINOMA/	7100
47	Medline	(10 AND 46)	24
48	EMBASE	exp CHORIOCARCINOMA/	9347
49	EMBASE	(42 AND 48)	22
50	EMBASE	exp INJURY/	1849647
51	EMBASE	(42 AND 50)	66
52	EMBASE	exp AMNIOCENTESIS/	14347
53	EMBASE	(42 AND 52)	57