



Date of Search: 17 Jan 2017

Sclerosing Cholangitis in Pregnancy

Summary

Primary sclerosing cholangitis (PSC) is a rare, chronic, fibrosing, inflammatory disorder of unknown aetiology affecting the biliary tree. Its complications include symptoms from pruritis and fatigue to dominant strictures, cholangiocarcinoma and liver failure necessitating liver transplant. PSC in pregnancy is rare therefore there is a paucity of data. No medical therapy has been proven to delay disease progression and as such liver transplantation is the only therapy shown to prolong survival.

Patients may present with jaundice, fever, pruritis, and right upper quadrant pain. There is a hypothesis suggestive of hormonal influence which is supported by reports of patients developing the disease during or shortly after pregnancy. Patients have elevated alkaline phosphatase and γ -glutamyl transpeptidase levels and underlying bile duct abnormalities seen on ultrasound, cholangiography, magnetic resonance cholangiography, or liver biopsy.

The medication that has been used most commonly is UDCA (ursodeoxycholic acid), a category B drug. Its safety during lactation is not known. Human fetotoxicity from UDCA has not been reported; however, the data are not sufficient to determine risk in the first trimester. Therapeutic trials with UDCA have yielded inconsistent results, and high doses (25-30 mg/kg daily) may actually be harmful and should be avoided. UDCA can be administered during pregnancy, especially after the first trimester, to reduce cholestasis and accompanying sequelae such as pruritus.

Sources:

Kane SV. Gastrointestinal Disease and Pregnancy. In: *Mayo Clinic Gastroenterology and Hepatology Board Review*. Oxford, UK: Oxford University Press; 2014.
<http://oxfordmedicine.com/view/10.1093/med/9780199373338.001.0001/med-9780199373338-chapter-25> . Accessed January 17, 2017.

Arulkumaran S, Farquharson DIM, Monga A, Papageorghiou AT, Regan L, eds. Maternal medicine and infections. In: *ODR Obstetrics and Gynaecology*. Oxford, UK: Oxford University Press; 2011:174-318. <http://oxfordmedicine.com/view/10.1093/med/9780199552214.001.0001/med-9780199552214-chapter-008> . Accessed January 17, 2017.

1. A population-based cohort study of pregnancy outcomes among women with primary sclerosing cholangitis.

Author(s): Ludvigsson, Jonas F; Bergquist, Annika; Ajne, Gunilla; Kane, Sunanda; Ekblom, Anders; Stephansson, Olof

Source: Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association; Jan 2014; vol. 12 (no. 1); p. 95

Publication Date: Jan 2014

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

Abstract: Studies of primary sclerosing cholangitis (PSC) and pregnancy outcomes have been limited in size and have been inadequate to rule out excess risks. We examined pregnancy outcomes among women with PSC. Women with PSC were identified from inpatient and hospital-based outpatient data in the Swedish National Patient Register. Through linkage with the Medical Birth Register, we identified 229 singleton births, from 1987 through 2009, to women with PSC before delivery. These were compared with 2,304,863 births to women without a diagnosis of PSC. We used logistic regression, adjusted for maternal age, smoking, education, parity, and year of birth, to calculate adjusted prevalence odds ratios (aPORs) for adverse pregnancy outcomes. Maternal PSC was associated with a 3.63-fold increase in preterm birth (95% confidence interval [CI] for aPOR, 2.35-5.61) as well as an increased risk of cesarean section (aPOR, 2.18; 95% CI, 1.50-3.17). We found no increased risk based on analyses of the 5-minute Apgar score, small for gestational age, stillbirths, or neonatal deaths. Maternal PSC was not a risk factor for congenital abnormalities (aPOR, 1.12; 95% CI, 0.56-2.22). Stratification by inflammatory bowel disease status did not affect the risk estimates more than marginally. Maternal PSC is associated with both preterm birth and cesarean section but not with congenital malformation or other adverse outcomes of pregnancy. Pregnancy should not be discouraged in women with PSC. Copyright © 2014 AGA Institute. Published by Elsevier Inc. All rights reserved.

Database: Medline

2. AISF position paper on liver disease and pregnancy

Author(s): Morisco F.; Caporaso N.; Guarino M.; Petraglia F.; Bruno R.; Bugianesi E.; Vannic E.; Burra P.; Rodriguez-Castro K.; Calvaruso V.; Licata A.; Cannoni A.; Vannuccini S.; Voltolini C.; Caviglia G.P.; Ciancio A.; Smedile A.; Fargion S.; Valenti L.; Federico A.; Loguercio C.; Floreani A.; Gaeta G.B.; Invernizzi P.; Mazzella G.; Primignani M.; Villao E.

Source: Digestive and Liver Disease; Feb 2016; vol. 48 (no. 2); p. 120-137

Publication Date: Feb 2016

Publication Type(s): Journal: Article

Abstract: The relationship between liver disease and pregnancy is of great clinical impact. Severe liver disease in pregnancy is rare; however, pregnancy-related liver disease is the most frequent cause of liver dysfunction during pregnancy and represents a severe threat to foetal and maternal survival. A rapid differential diagnosis between liver disease related or unrelated to pregnancy is required in women who present with liver dysfunction during pregnancy. This report summarizes the recommendation of an expert panel established by the Italian Association for the Study of the Liver (AISF) on the management of liver disease during pregnancy. The article provides an overview of liver disease occurring in pregnancy, an update on the key mechanisms involved in its pathogenesis, and an assessment of the available treatment options. The report contains in three sections: (1) specific liver diseases of pregnancy; (2) liver disease occurring during pregnancy; and (3) pregnancy in patients with pre-existing chronic liver disease. Each topic is discussed considering the most relevant data available in literature; the final statements are formulated according to both scientific

evidence and clinical expertise of the involved physicians, and the AISF expert panel recommendations are reported. Copyright © 2015 Editrice Gastroenterologica Italiana S.r.l.

Database: EMBASE

3. Fertility and pregnancy in primary sclerosing cholangitis

Author(s): Wellge B.E.; Sterneck M.; Eulenburg C.Z.; Lohse A.W.; Schramm C.; Teufel A.; Galle P.; Rust C.; Franke A.; Schreiber S.; Gunther R.; Braun F.; Berg T.; Kreisel W.; Breuers U.

Source: Journal of Hepatology; Apr 2010; vol. 52

Publication Date: Apr 2010

Publication Type(s): Journal: Conference Abstract

Abstract:Background and Aims: There is a paucity of data on pregnancy or fertility in patients with primary sclerosing cholangitis (PSC). Therefore, counseling of young patients with PSC is difficult. This retrospective study aimed at investigating the outcome of pregnancy as well as the disease course in patients with PSC and pregnancy. In addition, the number of children in a large cohort of PSC patients was compared to healthy controls. Methods: Patients with known PSC and at least one pregnancy or who received a diagnosis of PSC within 6 months after delivery were identified at four liver units. The patients' records were reviewed and data obtained by detailed questionnaires. Information on the number of children was obtained from the popgen database, Kiel. Results: The number of children did not differ between 225 PSC patients and 563 healthy controls (1 child per patient and control). However, men with PSC had significantly less children as compared to women with PSC and as compared to male controls ($p=0.001$). A detailed analysis of 25 pregnancies in 17 female PSC patients with a median age at conception of 31 years (22-37) was performed. 14/17 patients had coexisting inflammatory bowel disease and 2 patients were diagnosed with liver cirrhosis. An increase in alkaline phosphatase serum levels was documented during 4 pregnancies and in 8 cases post partum. The 25 pregnancies resulted in 21 live births at a median of 39 weeks (31-41) of gestation with a birth weight of 3200g (1694-4075) and a length of 50cm (46-55). All live births presented with a normal perinatal (APGAR-Index: 10 (7-10)) and postnatal development over a median observation time of 50 months (2-132mo). 2 pregnancies were delivered pre-term (31wk; 34wk) due to intrahepatic cholestasis of pregnancy and pre-term ruptured membranes. 4 fetal losses occurred early in pregnancy (<12wk), two after having stopped UDCA/azathioprine treatment. Continuation of treatment with azathioprine (3/21) or UDCA (13/21) had no negative affect on pregnancy outcome. Conclusions: The reduced fertility in male, but not female patients with PSC warrants further study. Pregnancies in patients with PSC do not seem to carry an increased risk for mother or child.

Database: EMBASE

4. Liver diseases in pregnancy: diseases not unique to pregnancy.

Author(s): Almashrawi, Ashraf A; Ahmed, Khulood T; Rahman, Rubayat N; Hammoud, Ghassan M; Ibdah, Jamal A

Source: World journal of gastroenterology; Nov 2013; vol. 19 (no. 43); p. 7630-7638

Publication Date: Nov 2013

Publication Type(s): Journal Article Review

Available in full text at [World Journal of Gastroenterology](#) - from Free Access Content

Abstract: Pregnancy is a special clinical state with several normal physiological changes that influence body organs including the liver. Liver disease can cause significant morbidity and mortality in both pregnant women and their infants. Few challenges arise in reaching an accurate diagnosis in light of such physiological changes. Laboratory test results should be carefully interpreted and the knowledge of what normal changes to expect is prudent to avoid clinical misjudgment. Other challenges entail the methods of treatment and their safety for both the mother and the baby. This review summarizes liver diseases that are not unique to pregnancy. We focus on viral hepatitis and its mode of transmission, diagnosis, effect on the pregnancy, the mother, the infant, treatment, and breast-feeding. Autoimmune hepatitis, primary biliary cirrhosis, primary sclerosing cholangitis, Wilson's disease, Budd Chiari and portal vein thrombosis in pregnancy are also discussed. Pregnancy is rare in patients with cirrhosis because of the metabolic and hormonal changes associated with cirrhosis. Variceal bleeding can happen in up to 38% of cirrhotic pregnant women. Management of portal hypertension during pregnancy is discussed. Pregnancy increases the pathogenicity leading to an increase in the rate of gallstones. We discuss some of the interventions for gallstones in pregnancy if symptoms arise. Finally, we provide an overview of some of the options in managing hepatic adenomas and hepatocellular carcinoma during pregnancy.

Database: Medline

5. Managing the patient with an abnormal liver test: Part 2, alkaline phosphatase elevations and liver enzyme abnormalities in pregnancy

Author(s): Schiff E.R.; Foont J.

Source: Consultant; Jan 2008; vol. 48 (no. 1); p. 41-44

Publication Date: Jan 2008

Publication Type(s): Journal: Short Survey

Abstract: The first step in the workup of a patient with a persistent asymptomatic alkaline phosphatase (ALP) elevation is to measure gamma-glutamyltranspeptidase to determine whether the elevation is liver-related or bone-related. Fatigue is a common early symptom in patients with biliary tract disease; pruritus usually develops later. In middle-aged women, primary biliary cirrhosis (PBC) is the most likely cause of an asymptomatic ALP elevation. Primary sclerosing cholangitis (PSC) occurs most often in younger men. If you suspect PBC, order a test for antimitochondrial antibodies; a positive result increases the likelihood of the diagnosis. PSC is best diagnosed by cholangiography. Liver function test abnormalities frequently occur during pregnancy. Causes can include non-pregnancy-related illnesses (such as hepatitis C), the normal pregnancy-related rise in ALP levels, hyperemesis gravidarum, cholestasis of pregnancy, HELLP syndrome (Hemolysis, Elevated Liver enzymes, and Low Platelet count), and acute fatty liver of pregnancy. The last 2 disorders are obstetrical emergencies and require prompt delivery.

Database: EMBASE

6. Pregnancy in cholestatic liver disease

Author(s): Westbrook R.; Hughes S.A.; O'Grady J.G.; Devlin J.; Harrison P.M.; Heneghan M.A.

Source: Hepatology; Oct 2011; vol. 54

Publication Date: Oct 2011

Publication Type(s): Journal: Conference Abstract

Available in full text at [Hepatology](#) - from John Wiley and Sons

Abstract: Introduction: Pregnancy in women with cholestatic liver disease (CLD) is rare and there is a paucity of data on outcomes both for the foetus and mother. We evaluated all patients with CLD who self reported pregnancy at our centre with respect to maternal and foetal outcomes. Results: Twenty-seven conceptions occurred in 19 women with CLD. The underlying diagnosis was primary sclerosing cholangitis (n=3), primary biliary cirrhosis (n=6), autoimmune sclerosing cholangitis (AISC) (n=4) and genetic congenital syndromes (n=6). Four conceptions occurred in 2 women with cirrhosis. At conception the median ALP was 200 IU/L (55-709), GGT was 150 U/L (43-436) and bilirubin was 10 $\mu\text{mol/L}$ (4-56). The live birth rate was 81% (22/27). There were 4 (15%) miscarriages (2 in women with cirrhosis) and 1 termination of pregnancy. The median age at conception was 28-years (range 19-45) and the median gestational week was 37 (range 33-39). Four neonates were delivered prematurely due to severe maternal cholestasis and pruritus and 2 required admission to the special care baby unit. All survived to hospital discharge and no congenital anomalies were reported. Thirteen women reported pruritus in the third trimester; those with pruritus had a significantly higher pre-conception GGT ($p=0.002$) and ALP ($p=0.07$) and 3rd trimester GGT ($p=0.01$) and ALP ($p=0.04$). Furthermore the increment (DELTA) in GGT ($p=0.045$) and ALP ($p=0.05$) between pre conception and 3rd trimester levels was higher in those patients reporting pruritus. There were no maternal deaths however one woman (with cirrhosis) required admission to intensive care for 24 hours post-partum and a second had a significant post-partum haemorrhage. Eight women had worsening of their liver function tests post-partum; 3 had AISC and developed a transaminitis which was controlled with steroids, 5 women developed worsening of their cholestatic parameters which settled with either reintroduction or augmentation of UDCA. At one year post-partum there was no significant change from the pre conception GGT or ALP levels. Twenty-three conceptions occurred on ursodeoxycholic acid (UDCA). Fifteen women continued it throughout pregnancy. The mean dose was 1000mg/day (range 500-1500mg). Treatment with UDCA did not affect foetal outcome nor was it associated with congenital anomalies. Women taking UDCA had lower DELTAGGT ($p=0.09$) and DELTAALP ($p=0.1$) in third trimester when compared to those women who discontinued it. Conclusions: Foetal outcomes in women with CLD appear good. A worsening of cholestasis and pruritus occurs in about 50%, UDCA appears safe and serious maternal adverse events are rare.

Database: EMBASE

7. Pregnancy in primary sclerosing cholangitis

Author(s): Gossard A.; Lindor K.

Source: Gut; Aug 2011; vol. 60 (no. 8); p. 1027-1028

Publication Date: Aug 2011

Publication Type(s): Journal: Note

Available in full text at [Gut](#) - from Free Access Content

Available in full text at [Gut](#) - from Highwire Press

Database: EMBASE

8. Pregnancy in primary sclerosing cholangitis

Author(s): Wellge B.E.; Sterneck M.; Lohse A.W.; Schramm C.; Galle P.; Rust C.

Source: Liver Transplantation; Jul 2009; vol. 15

Publication Date: Jul 2009

Publication Type(s): Journal: Conference Abstract

Available in full text at [Liver Transplantation](#) - from John Wiley and Sons

Abstract:OBJECTIVE: Counseling of woman with primary sclerosing cholangitis (PSC) in childbearing age is difficult, since little is known on the impact of PSC on the outcome of pregnancy and of pregnancy on the course of disease. This retrospective study aimed at investigating the outcome of pregnancy as well as the disease course in patients with PSC and pregnancy. PATIENTS & METHODS: Patients with known PSC and at least one pregnancy or who received a diagnosis of PSC within 6 month after delivery were identified at four liver units. The patients' records were reviewed and data obtained by detailed questionnaires sent to the patients. Results are shown as median and range. RESULTS: 24 pregnancies in 17 PSC patients with a median age at conception of 30 years (22-37) were included into the study. 14/17 patients had coexisting inflammatory bowel disease and 2 patients were diagnosed with liver cirrhosis. An increase in alkaline phosphatase serum levels was documented during 4 pregnancies and in 8 cases post partum. The 24 pregnancies resulted in 20 live births at a median of 39 weeks (31-41) of gestation with a birth weight of 3200g (1694-4075) and a length of 50 cm (46-55). All live births presented with a normal perinatal (APGAR-Index: 10 (7-10)) and postnatal development over a median observation time of 50 months (3-132 mo). 2 pregnancies were delivered pre-term (31 wk; 34 wk) due to intrahepatic cholestasis of pregnancy and pre-term ruptured membranes. 4 fetal losses occurred early in pregnancy (<12 wk), two after having stopped UDCA/ azathioprine treatment. Continuation of treatment with azathioprine (3/20) or UDCA (12/20) had no negative affect on pregnancy outcome. CONCLUSIONS: Patients with PSC are able to deliver healthy children without an apparent increase in risk for mother or child. Close monitoring during pregnancy and post partum seems advisable due to possible flares of disease activity.

Database: EMBASE

9. Pregnancy in primary sclerosing cholangitis.

Author(s): Wellge, Björn E; Sterneck, Martina; Teufel, Andreas; Rust, Christian; Franke, Andre; Schreiber, Stefan; Berg, Thomas; Günther, Rainer; Kreisel, Wolfgang; Zu Eulenburg, Christine; Braun, Felix; Beuers, Ulrich; Galle, Peter R; Lohse, Ansgar W; Schramm, Christoph

Source: Gut; Aug 2011; vol. 60 (no. 8); p. 1117-1121

Publication Date: Aug 2011

Publication Type(s): Comparative Study Journal Article

Available in full text at [Gut](#) - from Free Access Content

Available in full text at [Gut](#) - from Highwire Press

Abstract:There is a paucity of data on fertility or pregnancy in patients with primary sclerosing cholangitis (PSC). To assess fertility in PSC by comparing the number of children in a large cohort of PSC patients to healthy controls and to investigate the outcome of pregnancy, as well as the influence of pregnancy on the disease course. Case series. Germany. 229 PSC patients and 569 healthy controls were evaluated for the number of children. 17 patients with PSC and at least one pregnancy, or who received a diagnosis of PSC within 6 months after delivery, were included in the more detailed analysis. Number of children per patient and control; disease activity during pregnancy and after delivery including maternal complications; long-term development of live births, fetal loss rate and the influence of medication on fetal and maternal outcome. Fertility did not seem to be reduced in PSC since the number of children did not differ between PSC patients and healthy controls. 25 pregnancies in 17 female PSC patients (median age at conception 31 years) were investigated in detail. An increase in liver enzymes was documented during five pregnancies (20%) and eight times (32%) post-partum. There were no serious maternal complications. All 21 live births presented with a normal perinatal and postnatal development over a median observation time of 50 months. Two pregnancies were delivered pre-term and four fetal losses occurred early in pregnancy (<12 wk). Continuation of treatment with ursodeoxycholic acid (15/21) or azathioprine (2/21) had no negative effects on pregnancy outcome. Fertility does not seem to be reduced in patients with PSC, who are able to deliver healthy children without an apparent increase in risk for mother or child.

Database: Medline

10. Pregnancy resolves liver fibrosis and improves sclerosing cholangitis in Mdr2 (ABCB4) $-/-$ mice via direct anti-inflammatory effects of sex hormones

Author(s): Halilbasic E.; Claudel T.; Gumhold J.; Halsegger S.; Silbert D.; Fickert P.; Trauner M.

Source: Journal of Hepatology; Apr 2010; vol. 52

Publication Date: Apr 2010

Publication Type(s): Journal: Conference Abstract

Abstract:Background and Aims: Liver fibrosis in chronic hepatitis C progresses with menopause while postmenopausal women with hormone replacement therapy have lower degrees of liver fibrosis. Moreover, estrogen treatment leads to improvement of liver injury in CCl₄-induced liver fibrosis in rats. On the other hand, mutations in MDR3 (ABCB4) gene are associated with increased risk for intrahepatic cholestasis in pregnancy (ICP). The pathogenesis of ICP may be linked to the effects of estrogen and progesterone metabolites on bile secretion. Therefore, we aimed to test the effects of pregnancy on development of liver fibrosis and cholangitis in Mdr2 $-/-$ mice, known to develop liver injury due to abnormal biliary composition. Methods: Pregnant (18.5 days) Mdr2 $-/-$ mice were compared with age-matched Mdr2 $-/-$ and wild-type control. Liver injury was evaluated using serum liver enzymes and liver histology. Markers of hepatic fibrosis, ductular proliferation and inflammation were studied using Q-PCR and Western blotting. Bile flow and biliary composition

were determined. Anti-inflammatory effects of estrogen and progesterone were studied in vitro in female mouse macrophage cell line (RAW264) and bile duct epithelial cell line (BEC) upon activation with LPS and TNF- α respectively. Results: Pregnancy led to reduction of ALT, AP and bile acid levels in Mdr2 $^{-/-}$ mice and improved liver histology. Moreover, reduction of liver fibrosis correlated with decreased hydroxyproline content, mRNA expression of Tgf-1b, Col1a1, Col1a2 and protein expression of α -SMA in pregnant Mdr2 $^{-/-}$ mice. In addition, hepatic inflammatory response was lowered during pregnancy resulting in down-regulation of Tnf- α , Il-6, Mcp-1 mRNA. No changes in biliary bile acid, cholesterol or phospholipid content were observed between pregnant and non-pregnant mice. Estrogen and progesterone directly reduced Tnf- α , Mcp-1 and iNos production in LPS and Tnf- α treated RAW264 and BEC cells. Conclusions: Pregnancy ameliorates liver injury in Mdr2 $^{-/-}$ mice without having striking effects on bile acid homeostasis. Direct anti-inflammatory and anti-fibrotic effects of estrogen and progesterone on hepatic inflammatory cells and reactive cholangiocytes may explain the unexpected improvement of sclerosing cholangitis and cholestatic liver injury in Mdr2 $^{-/-}$ mice.

Database: EMBASE

11. Preterm birth related to post-endoscopic retrograde cholangiopancreatography pancreatitis in pregnancy with newly diagnosed primary sclerosing cholangitis.

Author(s): Ozdemir, O; Karaahmet, F; Sari, E; Yakut, K; Ertugrul, F A; Atalay, C

Source: Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Apr 2015; vol. 35 (no. 3); p. 305-306

Publication Date: Apr 2015

Publication Type(s): Case Reports Journal Article

Available in full text at [Journal of Obstetrics and Gynaecology](#) - from Taylor & Francis

Database: Medline

12. Primary Biliary Cirrhosis and Primary Sclerosing Cholangitis: a Review Featuring a Women's Health Perspective.

Author(s): Marchioni Beery, Renée M; Vaziri, Haleh; Forouhar, Faripour

Source: Journal of clinical and translational hepatology; Dec 2014; vol. 2 (no. 4); p. 266-284

Publication Date: Dec 2014

Publication Type(s): Journal Article Review

Available in full text at [Journal of Clinical and Translational Hepatology](#) - from National Library of Medicine

Abstract:Primary biliary cirrhosis (PBC) and primary sclerosing cholangitis (PSC) are two major types of chronic cholestatic liver disease. Each disorder has distinguishing features and variable progression, but both may ultimately result in cirrhosis and hepatic failure. The following offers a review of PBC and PSC, beginning with a general overview of disease etiology, pathogenesis, diagnosis, clinical features, natural course, and treatment. In addition to commonly associated manifestations of fatigue, pruritus, and fat-soluble vitamin deficiency, select disease-related topics pertaining to women's health are discussed including metabolic bone disease, hyperlipidemia and cardiovascular risk, and pregnancy-related issues influencing maternal disease course and birth outcomes. This comprehensive review of PBC and PSC highlights some unique clinical considerations in the care of female patients with cholestatic liver disease.

Database: Medline

13. Primary sclerosing cholangitis and pregnancy.

Author(s): Kammeijer, Casper Q; De Man, Robert A; De Groot, Christianne J M

Source: Clinics and practice; Jul 2011; vol. 1 (no. 3); p. e55

Publication Date: Jul 2011

Publication Type(s): Journal Article

Available in full text at [Clinics and Practice](#) - from National Library of Medicine

Abstract: Primary sclerosing cholangitis is a progressive disease, and coincidentally in pregnancy it is rare. It is characterized by progressive inflammation and destruction of bile ducts finally resulting in liver failure. A rare case of primary sclerosing cholangitis in pregnancy is presented. The course of the pregnancy was marked by threatened preterm delivery and exacerbation of cholestasis. She was successfully treated with ursodeoxycholic acid (UDCA). Although, primary sclerosing cholangitis has both maternal and fetal effects on pregnancy, the overall outcome is favorable. Only few cases have been reported using high dose ursodeoxycholic acid for primary sclerosing cholangitis in pregnancy, it often improves pruritus but has no protection against stillbirth. Data on the safety to the fetus or neonate and long-term outcome are scarce.

Database: Medline

14. Primary sclerosing cholangitis in pregnancy refractory to ursodeoxycholic acid treatment

Author(s): Leftwich H.; Fang Y.M.V.; Borgida A.; Crombleholme W.

Source: Journal of Reproductive Medicine for the Obstetrician and Gynecologist; 2010; vol. 55 (no. 11); p. 517-519

Publication Date: 2010

Publication Type(s): Journal: Article

Abstract:BACKGROUND: Primary sclerosing cholangitis (PSC) is a chronic cholestatic liver disease associated with fibrosis and inflammation of the bile ducts. Its complications include symptoms from pruritis and fatigue to dominant strictures, cholangiocarcinoma and liver failure necessitating liver transplant. Due to its predominance in young males, little is reported regarding PSC and pregnancy. CASE: We report a case of a pregnant woman with PSC whose symptoms were initially unresponsive to the traditional treatment of ursodeoxycholic acid (UDCA) early in her pregnancy but subsequently did well using high dose steroids for the duration of her pregnancy. CONCLUSION: With close management, successful pregnancy outcomes seem possible with patients with PSC, even when diagnosed multiple years prior to pregnancy, if not with UDCA, then possibly with steroid treatment. © Journal of Reproductive Medicine, Inc.

Database: EMBASE

15. Secondary Sclerosing Cholangitis During Pregnancy.

Author(s): Abdulqader, Yasir; Chuang, Keng-Yu; Ravi, Jyotsna; Nadir, Abdul

Source: ACG case reports journal; Jul 2016; vol. 3 (no. 4); p. e114

Publication Date: Jul 2016

Publication Type(s): Journal Article

Available in full text at [ACG Case Reports Journal](#) - from National Library of Medicine

Abstract:We report a case of secondary sclerosing cholangitis that manifested itself during pregnancy. A tentative diagnosis of intrahepatic cholestasis of pregnancy was considered, but after her third delivery, a liver biopsy and imaging, as well as review of past records, confirmed the diagnosis of secondary sclerosing cholangitis. Maternal and fetal outcomes of primary sclerosis cholangitis have been reported, and this case highlights the importance of considering other diseases besides the benign intrahepatic cholestasis of pregnancy as a cause of cholestasis in pregnancy.

Database: Medline

16. The outcome of pregnancy in patients with primary sclerosing cholangitis

Author(s): Antoniazzi S.; Costa L.; Cazzagon N.; Egoue J.; Floreani A.; Gervasi M.T.

Source: Journal of Hepatology; Mar 2011; vol. 54

Publication Date: Mar 2011

Publication Type(s): Journal: Conference Abstract

Abstract:Background: Few data are reported on the outcome of pregnancy in patients with PSC; the largest series up-to-now published, included 13 cases seen in Sweden. Aim: To evaluate the outcome of pregnancy in patients with PSC and, conversely, the effect of pregnancy on the disease. Methods: Among a consecutive series of female PSC patients, 10 women experienced 17 pregnancies after the diagnosis of PSC (mean age 26.5+/-4.2 years); 3 patients had associated inflammatory bowel disease. The outcome of pregnancy of PSC patients was compared with 10 age- and race-matched pregnant healthy controls. All women with PSC were taking ursodeoxycholic acid (15 mg/kg/day) during pregnancy except for the first trimester. Results: 6/10 women developed pruritus in the third trimester (without increase in total bile salts or transaminases), another woman experienced a mild increase in transaminases (2 fold the normal value) followed by a normalization after delivery; 3/17 pregnancies in PSC patients resulted in miscarriage at the first trimester. No miscarriages were recorded in controls. No exacerbation of IBD was observed in the 3 patients with ulcerative colitis. The outcome of pregnancy was favourable in all patients and the obstetrical parameters were not significantly different in patients vs controls: median gestational week 39 (I.R. 37.4-40) vs 39 (I.R. 38.7-40), birth weight 3230 g, (I.R. 2812.5-3572.5) vs 2995 g (I.R. 2860-3460), Apgar index at the first minute 9 (I.R. 9-9) vs 9 (I.R. 9-9) and at the fifth minute 10 (I.R. 10-10) vs 10 (I.R. 10-10). Caesarean section was recorded in 7/14 pregnancies (50%) vs 2/10 (20%) in controls (p < 0.05). Conclusions: The outcome of pregnancy in PSC patients had a favourable outcome. Neither mothers nor babies showed any ill effects.

Database: EMBASE

DISCLAIMER: Results of database and or Internet searches are subject to the limitations of both the database(s) searched, and by your search request. It is the responsibility of the requestor to determine the accuracy, validity and interpretation of the results.

Strategy 118137

#	Database	Search term	Results
1	Medline	("sclerosing cholangitis").ti,ab	5056
2	Medline	exp "CHOLANGITIS, SCLEROSING"/	2697
3	Medline	(1 OR 2)	6491
4	Medline	(pregn*).ti,ab	388921
5	Medline	exp PREGNANCY/	463314
6	Medline	(4 OR 5)	684300
7	Medline	(3 AND 6)	81
8	Medline	7	45
9	EMBASE	("sclerosing cholangitis").ti,ab	7646
10	EMBASE	exp "SCLEROSING CHOLANGITIS"/	3415
11	EMBASE	(9 OR 10)	8700
12	EMBASE	(pregn*).ti,ab	538205
13	EMBASE	exp PREGNANCY/	718144
14	EMBASE	(12 OR 13)	858853
15	EMBASE	(11 AND 14)	137
16	EMBASE	15	88
17	Medline	exp "PREGNANCY COMPLICATIONS"/	207744
18	Medline	(3 AND 17)	20