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Cholestasis of Pregnancy

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Abstract: ***Intrahepatic cholestasis of pregnancy (ICP) appears in the second and third trimester of pregnancy and is characterized by pruritus and an increase of serum bile acid concentration. Cholestasis is associated with many hepatic-biliary disorders that produce extrahepatic biliary tract obstruction and/or intrahepatic biliary perturbation. A key symptom associated with cholestasis is pruritus, and could range in severity from mild to moderate (i.e. where sleep is disrupted) and to extreme (i.e. when the lifestyle of the patient is completely disrupted). It is often generalized but predominates on the palms and soles and manifests more violently at night. Pruritus may precede laboratory abnormalities. Total serum concentration of bile acid increase in cholestasis of pregnancy and may be the first or only laboratory abnormality. Other laboratory results reflecting cholestasis may also be present. These include increases in serum alkaline phosphatase (ALKP) , total and direct bilirubin concentration. However, uncommonly, serum levels of gamma- glutamyl transpeptidase (GGT) are normal or slightly elevated, which is unusual in many other forms of cholestatic liver disease in which GGT levels are similar to other cholestatic markers. Most women are diagnosed in the second or third trimester of pregnancy.***

Keywords: pregnancy, cholestasis, pruritis

1. Introduction

Intrahepatic cholestasis of pregnancy (ICP) appears in the second and third trimester of pregnancy and characterized by pruritus and an increase of serum bileacid concentration.

Cholestasis is associated with many hepatic-biliary disorders that produce extrahepatic biliary tract obstructionand/or intrahepatic biliary perturbation. A key symptomassociated with cholestasis is pruritus, and could rangein severity from mild to moderate (i.e. where sleep isdisrupted) and to extreme (i.e. when the lifestyle of the patient is completely disrupted). It is often generalized but predominates on the palms and soles and manifests more violently at night. Pruritus may precede laboratory abnormalities. Total serum concentration of bile acid increase in cholestasis of pregnancy and may be the first or only laboratory abnormality. Other laboratory results reflecting cholestasis may also be present. These include increases in serum alkaline phosphatase (ALKP) , total and direct bilirubin concentration. However, uncommonly, serum levels of gamma- glutamyltranspeptidase (GGT) are normal or slightly elevated, which is unusual in many other forms of cholestatic liver disease in which GGT levels are similar to other cholestatic markers. Most women are diagnosed in the second or third trimester of pregnancy.

2. Case Report

A 26 year old patient, normal weight, homemaker, booked &immunized ,thirdgravida,para 1,live 1,abortion 1,prev LSCS (ind:fetal distress), LCB – 4 yrs, at 28 weeks of gestation,(excellent dating) presented with c/o itching of palm & soles for 1 week,more during night,c/o nausea,no h/o vomiting , jaundice, abdominal pain, able to perceive fetal movements well. On examination, vitals stable, abdominal examination corresponds to period of gestation, fetal heart rate good,patient was admitted necessary laboratory test done, there is an increase in serum transaminases, alanine aminotransferase = 1101 U/L, aspartate transaminase = 562 U/L, modestly increase of total bilirubin = 1.09 mg/dL and direct bilirubin = 0.68 mg/dL (superior cut-of values 1mg/dl, and respectiv 0,3mg/dl), lactate dehydrogenase = 294 U/L, total cholesterol = 305 mg/ dL, triglycerides = 325 mg/dL, and mild elevations in the serum concentrations of ALKP = 181U/L (superior cut of value 136U/L). We noted absent proteinuria and unchanged coagulation samples. medical gastro enterologist opinion obtained, advised, Serum bile acid, extensive testing of hepatitis B & C done, review obtained with s.bile acid-22micromol/l & negative reports of hepatitis B & C values. Started on treatment with ursodeoxycholic acid (Ursofalk) divided in three doses of 250 mg, two tablets in the morning and one in the evening. Under this treatment, within two weeks, liver enzymes decrease by 200-300 UI/day, blood chemistry normalizes. Pruritus was relieved and subsequently remitted. The patient was admitted again at 38 weeks of pregnancy in labour and gives birth by lower segment caesarean for imminence of uterine rupture on scarred uterus, to a living foetus, male, weighting 3170 g. Subsequently, one month after delivery the biochemical and blood picture where within normal value.

3. Discussion

Hyperemesis gravidarum that occurs in early pregnancy with nausea, vomiting, affected hepatic samples which normalize with drugtreatment.

We have also discussed viral hepatitis and also pre-pregnancy hepatic impartment such as primary biliary cirrhosis or sclerosing cholangitis with symptoms onset before pregnancy andpresence of autoantibodies, biliary obstruction withabdominal pain and ultrasound changes of the liverand not least veno-occlusive disease which would havemeant ultrasound documented thrombosis.

After outlining the diagnosis we decided to administer a concentrated treatment for reducing symptomsand preventing maternal and fetal complications, themost promising option being ursodeoxycholic acid (Ursodiol), administered twice a day. It increases bileflow and has been used to relieve pruritus and improve biochemical hepatic tests and in cholestatic liver diseases such as primary biliary

cirrhosis. In our case, liveraminotransferases decreased within two weeks afterinitiation of therapy, with approximately 300 IU/day, the biochemical picture becoming Maternal prognosis of cholestasis of pregnancy is oftentolerated. Pruritus usually disappears within the firstfew days after delivery, accompanied by normalization of serum bile acids concentrations and other liver tests.

Biochemical liver tests and bile acids concentration monitoring is recommended for six to eight weeks after delivery.

4. Conclusion

In patients with pruritus and abnormal serum liver tests, especially in advanced stage of pregnancy, intrahepatic cholestasis of pregnancy should not be disregarded. The affected pregnancies have an increasedrisk of prematurity and in utero fetal death. In this caseit is highly recommended to consider the treatment with ursodeoxycholic acid and to try to deliver after 34 weeks of pregnancy. The main conditions incriminated in differential diagnosis and which should be considered in the context of an advanced pregnancy, especially in the thirdtrimester, are: acute fatty liver of pregnancy, preeclampsia, HELLP syndrome (hemolysis, elevated liverenzymes, low platelet count). Liver biopsy is rarelynecessary in the diagnosis of liver diseases that occurduring pregnancy.

The risk of recurrence in subsequent pregnancies is variable. There is a possibility that the risk for intrahepatic cholestasis' occurrence in subsequent pregnanciescannot be accurately predicted.

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