Summary and recomendations

Severe liver disease in pregnancy is rare. Pregnancy-related liver disease is the most frequent cause of liver dysfuncteion in pregnancy and provides a real threat to fetal and maternal survival. A rapid diagnosis diff erentiating between liver disease related and unrelated to pregnancy is required in women who present with liver dysfunction during pregnancy. Research has improved our understanding of the pathogenesis of pregnancy-related liver disease, which has translated into improved maternal and fetal outcomes. Here, we provide an overview of liver diseases that occur in pregnancy, an update on the key mechanisms involved in their pathogenesis, and assessment of available treatment options.

Abnormal liver tests occur in 3%-5% of pregnancies, with many potential causes, including coincidental liver disease (most commonly viral hepatitis or gallstones) and underlying chronic liver disease. However, most liver dysfunction in pregnancy is pregnancy-related and caused by 1 of the 5 liver diseases unique to the pregnant state: these fall into 2 main categories depending on their association with or without preeclampsia. The preeclampsia-associated liver diseases are preeclampsia itself, the hemolysis (H), elevated liver tests (EL), and low platelet count (LP) (HELLP) syndrome, and acute fatty liver of pregnancy. Hyperemesis gravidarum and intrahepatic cholestasis of pregnancy have no relationship to preeclampsia. Although still enigmatic, there have been recent interesting advances in understanding of these unique pregnancy-related liver diseases. Hyperemesis gravidarum is intractable, dehydrating vomiting in the first trimester of pregnancy;

50% of patients with this condition have liver dysfunction. Intrahepatic cholestasis of pregnancy is pruritus and elevated bile acids in the second half of pregnancy, accompanied by high levels of aminotransferases and mild jaundice. Maternal management is symptomatic with ursodeoxycholic acid; for the fetus, however, this is a high-risk pregnancy requiring close fetal monitoring and early delivery. Severe preeclampsia itself is the commonest cause of hepatic tenderness and liver dysfunction in pregnancy, and 2%-12% of cases are further complicated by hemolysis (H), elevated liver tests (EL), and low platelet count (LP)-the HELLP syndrome. Immediate delivery is the only definitive therapy, but many maternal complications can occur, including abruptio placentae, renal failure, subcapsular hematomas, and hepatic rupture. Acute fatty liver of pregnancy is a sudden catastrophic illness occurring almost exclusively in the third trimester; microvesicular fatty infiltration of hepatocytes causes acute liver failure with coagulopathy and encephalopathy. Early diagnosis and immediate delivery are essential for maternal and fetal survival.

Classification of liver diseases in pregnancy

Quoted from (Deepak J et al., 2010)

Pregnancy-related liver diseases

- Hyperemesis gravidarum
- Intrahepatic cholestasis of pregnancy
- Pre-eclampsia and eclampsia
- HELLP syndrome

- Acute fatty liver of pregnancy

Pregnancy-unrelated liver diseases

Pre-existing liver diseases

- Cirrhosis and portal hypertension
- Hepatitis B and C
- Autoimmune liver disease
- Wilson's disease

Liver diseases co-incident with pregnancy

- Viral hepatitis
- Biliary disease
- Budd-Chiari syndrome
- Liver transplantation
- Drug-induced hepatotoxicity

When to refer for a specialist opinion This would normally include (patients with:

2. Unexplained liver abnormalities more than 1.5 times normal on two occasions, a minimum of 6 weeks post pregnancy.
3. Unexplained liver disease with evidence of hepatic dysfunction (hypoalbuminaemia, hyperbilirubinaemia, prolonged prothrombin time or international normalised ratio).
4. Known liver disease where treatment beyond the withdrawal of the implicating agent is required. What tests to do before referral ***(Minuk G et al., 1998).***

Consider the following:

1. Screen for viral hepatitis: IgM antihepatitis A virus, HbsAg, antihepatitis C virus.
2. Antinuclear antibodies.
3. Caeruloplasmin in patients younger than 40 years.
4. Ultrasound of the liver especially where fatty infiltration is suspected (obese individuals, diabetics and/or hyperlipidaemic patients).