

## PATTERN OF JAUNDICE IN PREGNANCY

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### Abstract

Thirty-nine patients with jaundice in pregnancy were studied. 21(53.84%) had viral hepatitis, 8(20.51%) recurrent cholestasis of pregnancy and 10(25.64%) had no significant changes in their liver biopsies. Viral hepatitis was the commonest cause of jaundice in pregnancy.

### Introduction

Viral hepatitis and recurrent cholestasis of pregnancy account for 3/5ths of the cases of jaundice in pregnancy (B.M.J. 1967). Other causes of jaundice include common duct obstruction, haemolytic jaundice, toxæmia of pregnancy, drug-induced jaundice and acute fatty liver of pregnancy (King and Kerrins, 1958).

The purpose of this study was to determine the pattern of jaundice in pregnancy in Jinnah Postgraduate Medical Centre.

Table II: Correlation of Biochemical Findings and Histological Findings in the Liver

Investigation (Normal Range)	Histological findings		
	Viral Hepatitis (21)	Cholestasis (8)	No significant changes (10)
	Mean $\pm$ S.E.	Mean $\pm$ S.E.	Mean $\pm$ S.E.
Total Bilirubin mg% (0.2-1)	9.3 $\pm$ 1.66	5.78 $\pm$ 1.78	2.34 $\pm$ 0.51
SGOT mu/ml (0-12)	*61.19 $\pm$ 10.02	*38.68 $\pm$ 12.6	33.26 $\pm$ 10.5
SGPT mu/ml (0-12)	*59.61 $\pm$ 12.21	*20.13 $\pm$ 5.41	13.36 $\pm$ 2.51
Alkaline Phosphatase B.L.U. (0.8-2.5)	7.3 $\pm$ 0.73	5.77 $\pm$ 0.94	7.49 $\pm$ 1.06

\*P value  $\leq$  0.001

## Material and Method

Thirty-nine patients with jaundice admitted in the Department of Obstetrics and Gynaecology were studied in the period July, 1972-January, 1974. History was recorded and a detailed clinical examination performed.

Biochemical investigations included total and conjugated bilirubin estimated by the method of Mites and Hogg (1959), serum transaminases determined by the modified method of Reitman-Frankel (1973), and alkaline phosphatase using the method of Babson et al. (1966).

The diagnosis in all patients was confirmed by liver biopsy.

## Results

According to the histological findings the patients were divided into three groups-viral hepatitis (21) cholestasis (8) and no significant changes (10). The correlation of histological findings with the clinical findings is shown in Table I and with the biochemical findings in Table II. No remarkable differences in the clinical findings were observed in various groups. A significant difference was found in the level of transaminases between patients with acute viral hepatitis and recurrent cholestasis. Thirteen (61.9%) of the 21 patients with acute viral hepatitis, 6(75%) of the 8 with recurrent cholestasis of pregnancy and 8(80%) of 10 with no significant changes were in the third trimester of pregnancy.

Table I: Correlation of Clinical and Histological Findings

Clinical Findings	Histological findings		
	Viral Hepatitis (21)	Cholestasis (8)	No significant changes (10)
	No(%)	No(%)	No(%)
Jaundice	6 (28.57)	5 (62.5)	4 (40)
Pruritus	1 (4.7)	4 (50)	7 (70)
Hepatomegaly	21 (100)	8 (100)	8 (80)

One patient with viral hepatitis aborted, 5 patients with recurrent cholestasis of pregnancy gave a history of jaundice and 4 of pruritus in previous pregnancies, one of them had delivered an infant with congenital heart disease in her previous pregnancy.

Elevation of bilirubin levels was most marked in patients with acute viral hepatitis. A statistically significant difference was observed in the levels of serum transaminases between the patients with acute viral hepatitis and cholestatic jaundice of pregnancy. Abnormalities in the values of bilirubin and SGOT were also observed in patient with no significant histological changes in the liver. Alkaline phosphatase was elevated in all the cases.

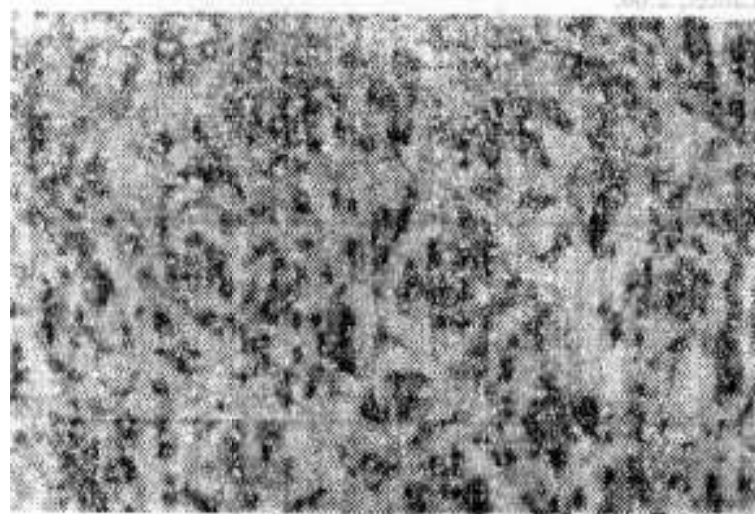


Fig. Liver biopsy (H & E x 250) showing swelling of liver cells and dispersal of cytoplasm into large clear areas and clumping of stainable material into small bits.

The liver biopsies in patients with acute viral hepatitis showed a normal lobular architecture with some cases showing widening of portal areas. Massive collapse was not seen. The liver cells showed slight swelling only but with dispersal of cytoplasm into large clear areas and the clumping of the stainable material into small bits. This speckled appearance was more marked as well as more frequent in cases with pregnancy than other cases of acute viral hepatitis as shown in the accompanying figure.

Liver biopsies of patients with cholestatic jaundice showed dilated canaliculi, slight ballooning of liver cells, cholestasis and bile thrombi in some cases.

Of the 10 patients whose liver biopsy showed no significant changes, 2 gave a history of jaundice and pruritus in previous pregnancies, 2 had palpable spleens, 2 unconjugated hyperbilirubinaemia, 1 of them had undergone mitral valvotomy and 1 patient had taken chloroquine before the onset of jaundice.

## Discussion

Jaundice in pregnancy could be due to either associated liver disease or due to diseases 'peculiar to the pregnant state' (Roth 1953), the most important causes of jaundice being viral hepatitis and recurrent cholestasis of pregnancy (Holzbach 1976).

Viral hepatitis is the commonest cause of jaundice in pregnancy (Meadow 1968). It accounts for 40% of the cases of jaundice in pregnancy (D.M.J. 1967) and it was present in 53.84% of patients in this study. Spontaneous abortion and premature labour may occur (Roth 1953). One patient in this series aborted. Still-births may also occur (Roth 1953; Meadow 1968).

Recurrent cholestatic jaundice of pregnancy develops in the last trimester (King and Kerrins, 1958). 75% of the patients in this study were in the last trimester. The jaundice clears in a few weeks after delivery with a tendency to recur in subsequent pregnancies (King and Kerrins, 1958; Sherlock, 1962; Simmons, 1963). Intervening pregnancies may be accompanied by pruritus gravidarum alone or by no manifestations of the overt cholestatic syndrome. Holzbach (1976) suggests that the jaundice is due to a genetically determined hypersensitivity of the mother to the increased endogenous gonadal and placentally derived hormones.

The generally accepted view is that recurrent cholestasis of pregnancy is benign to both mother and baby (Moore 1963), however, intra-uterine deaths have occurred (Dewhurst, 1968; Reid et al., 1976). The incidence of post-partem haemorrhage due to Vitamin K deficiency is high (Reid et al., 1976; Moore, 1963). The number of fetal and maternal complications in this series is not known as there was no follow-up. The incidence of gall stone formation is also increased in these patients (Holzbach 1976). Out of 200 patients with cholelithiasis seen in this department from January, 1975 to November, 1977, seventeen gave a history of jaundice in pregnancy (Hassan and Zuberi, 1977). A history of pruritus was not available in these patients.

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