

INFECTIVE HEPATITIS IN PREGNANCY

by

KAMALA ACHARI,* M.B.B.S., F.I.C.S., F.A.C.S., F.R.C.O.G.,

J. N. NARONE,** M.B.B.S. (Hons.), M.S. (Pat.)

and

RAJ K. NARONE,*** M.B.B.S. (Hons.), M.S. (Pat.)

Introduction

Jaundice in pregnancy represents an important medical problem. Our report is based on the analysis of 102 cases in which the detailed clinical picture, laboratory data, histology of the liver and medical and obstetric management have been discussed. The history of an influenza like onset of illness, exposure to infected cases, biochemical test and liver histology give evidence for the diagnosis of infective hepatitis. These cases were collected between January, 1963 to December, 1972. The early incidence was inconstant. The highest number of cases occurred in 1972.

Material and methods

The obstetric records of 12000 labour cases of Patna Medical College Hospital from 1963 to 1972 were analysed. One hundred and two cases of jaundice were detected, the incidence coming to 0.85 per cent or 8.5 per thousand.

Table I gives the yearly variation of cases of jaundice between 1963 to 1972.

*Professor of Obstetrics and Gynaecology, Patna Medical College, Patna, Bihar.

**Tutor in Obstetrics and Gynaecology, Patna Medical College, Patna, Bihar.

***Registrar, Department of Obstetrics & Gynaecology, Patna Medical College, Hospital, Patna.

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TABLE I

Yearly Distribution of Infective Hepatitis in Pregnancy

Year	1st trimester	2nd trimester	3rd trimester
1963	1	2	4
1964	0	2	3
1965	0	3	4
1966	—	2	5
1967	0	4	4
1968	1	3	6
1969	0	3	6
1970	0	2	5
1971	0	4	5
1972	2	10	20
Total	5	35	62

It has been noted that the maximum number of cases were seen in 1972. This is the period when there was an epidemic of jaundice due to infective hepatitis.

Table II gives the age and parity. The incidence is more frequent in the multi-gravida between the age of 31—35 years. This increase in incidence in infective hepatitis in multiparous women indicates that probably there is an element of mal-

TABLE II
Age and Parity in 102 Cases

Gravida	Age groups in years				
	1-20	21-25	26-30	31-35	36-40
Primi	4	5	3	4	2
2nd	2	6	8	6	2
3rd	—	8	9	10	3
4th	—	21	6	12	2
5th and above	—	—	—	5	3

TABLE III
Grade of Severity According to Trimesters

	No. of cases	Mild	Moderate	Severe
1st trimester	5	4	1	—
2nd trimester	35	10	20	5
3rd trimester	62	22	30	10

nutrition due to repeated pregnancies and nursing of the baby.

Table III gives the grade of severity according to trimester distribution. Severity of the case was judged according to the severity and duration of jaundice, state of patient, whether comatose, semi-comatose or conscious, serum bilirubin and SGPT. The distribution was heavily weighed towards the late stage of pregnancy in almost all previously reported series as well as in our own. Out of 102 cases of infective hepatitis with pregnancy; 5 were in the 1st trimester 35 towards the end of the 2nd trimester, 62 in the 3rd trimester. In the 1st trimester, one case was moderate-

ly severe and 4 were mild; in the 2nd trimester, 5 were severe and 30 were of mild and moderate; in the 3rd trimester, 10 cases were severe and 52 mild and moderate.

Table IV shows serum bilirubin values. Values between 5—9 mgm.% were observed in 42 cases, between 10—15 mgm. in 5 cases, and above 16 mgm. in only 1 case. However, there was no close correlation between the serum bilirubin level and the severity of jaundice nor was there a critical value separating the fatal from the non-fatal illness.

Table V shows that the amount of rise in S.G.P.T. directly indicating the degree

TABLE IV
Serum Bilirubin in 102 Cases

Stage of pregnancy	Serum bilirubin (mgm/ml)			
	1-4	5-9	10-15	10-20
1st trimester	4	1	—	—
2nd trimester	30	4	1	—
3rd trimester	22	37	4	1

TABLE V
Serum S.G.P.T. in 102 Cases

Stage of pregnancy	Serum S.G.P.T. (dg/ml.)			
	50-100	100-150	150-200	Above 200
1st trimester	4	1	—	—
2nd trimester	10	15	8	2
3rd trimester	22	24	10	8

of hepatic necrosis is seen more in the last trimester of pregnancy.

Treatment

The cases of infective hepatitis were grouped according to the severity of the condition into mild, moderate and severe grades. The treatment was largely divided into medical and obstetrical management.

Medical: All the cases were hospitalised and put to absolute bed rest. The severe cases came in an unconscious state. Intravenous 25% glucose drip was started with Vitamin C and B-complex. Cortisone was given to every case along with tetracycline. Achromycin was given through Ryle's tube for at least 7 days. Gastric aspiration was done every 6 hours. Vitamin K was given parenterally to minimise the risk of postpartum haemorrhage. Cases who were restless were given paraldehyde parenterally. The treatment in the moderate case varied. Vitamin C and B-complex were given parenterally. Patients were allowed

a rich sugarcane juice drink; fatty diet and protein were completely curtailed. Cortisone and tetracycline were given in the severe cases at least for 10 days.

Mild cases were allowed to take glucose orally and the rest of the treatment consisted of broad-spectrum antibiotics and cortisone. Conservative treatment and supportive therapy was the main line of treatment in the obstetric management of the cases. Therapeutic interruption of pregnancy for the sake of jaundice was not done in any of the cases as it was considered that the damage of anaesthesia and operation risk would outweigh any advantage it could offer.

Cases who came in the first trimester were hospitalised, treated and went away undelivered. One case could not be followed upto term, 4 cases had full-term normal delivery. The response to conservative treatment was good. In the first trimester all the cases belonged to mild and moderate group.

Of the cases in the second trimester

TABLE VI
Obstetric Outcome in 102 Cases

	Could not be recorded	Normal delivery	Abortion	P.P.H.	Premature delivery	Still-birth	Died undelivered
1st trimester (5 cases)	1	4	—	—	—	—	—
2nd trimester (35 cases)	3	18	8	2	3	1	2
3rd trimester (62 cases)	1	25	—	4	10	18	8

8 aborted spontaneously and 2 cases of severe jaundice died undelivered. There were 18 normal deliveries, 2 cases of P.P.H. and one stillbirth. In the 3rd trimester, 10 cases had premature labour. Towards the later part of the 3rd trimester, there were 25 normal deliveries, 4 cases had P.P.H. and 18 stillbirths. One case could not be recorded. Of the 10 cases of maternal deaths, 8 cases were in hepatic coma on admission, the duration of jaundice being over 7 to 15 days and 2 cases had fulminating jaundice of short duration. All these cases died undelivered.

general response of the body, and the time of biopsy in the course of disease.

Hepatic Changes

In acute viral hepatitis, structural changes in the liver vary from cell to cell and also with various stages. The structural alterations are in general remarkable but not specific. In early stage of viral hepatitis the alteration of the bile duct in the portal tract is not remarkable. However, there is mononuclear cell infiltration mostly lymphocytes and a few plasma cells and eosinophils (Fig. I).

TABLE VII
Distribution of Maternal Deaths of 10 Cases According to Age Group

Age groups in years	No. of cases	Mortality	Percentage
16-20	6	-	-
21-25	21	3	14.28
26-30	26	3	11.53
31-35	37	4	10.81
36-40	13	-	-

The incidence of mortality in all the age groups was same. Hence age had no effect on the death rate.

The hepatocytes appeared to be markedly dense, shrunk or compressed by the neighbouring cells (Figs. II & III).

TABLE VIII
Distribution of Maternal Deaths in 10 Cases According to Trimester

	No. of cases	Mortality	Percentage
1st trimester	5	-	-
2nd trimester	35	2	5.7
3rd trimester	62	8	28.9

The mortality was highest in the 3rd trimester, as the severity of jaundice is maximum.

Histopathologic changes that occur as a result of original injury by the virus depend on the degree of interaction of the infective agent, and the local and

It has been debated whether or not in viral hepatitis, mesenchymal reaction is the primary change, because the mesenchymal changes in viral hepatitis are very remarkable in comparison with other types of hepatitis. In the severe cases fibroblasts completely obliterate

any remnant of the liver structure. lar debris and platelets are seen in large number (Fig. IV).

Summary

One hundred and two cases of infective hepatitis have been analysed. The detailed clinical picture, laboratory data, histology of the liver and medical and obstetric management have been reviewed.

Eighty per cent of the cases were between the age group of 18 to 30 years.

Sixty-two cases were in the 3rd trimester, 35 in the 2nd trimester and 5 in the first trimester. The serum bilirubin value ranged from 5 to 19 mgm.%, S.G.P.T. ranged from 18 to 200 ug./ml. The histology of the liver shows changes of liver structure and its consequent changes according to the severity of jaundice. Conservative attitude was employed in the obstetric management. The maternal mortality was 10 percent.

See Figs. on Art Paper VI