

# CLINICAL STUDY OF VIRAL HEPATITIS IN PREGNANCY AND PUERPERIUM IN RURAL POPULATION OF MARATHWADA

by

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## Introduction

Pregnant females are more vulnerable to viral hepatitis than non-pregnant females (Editorial, 1970). The course of hepatitis during pregnancy is a subject of continued interest and controversy. Divergent opinions exist about the maternal mortality when hepatitis occurs in pregnancy. Datta (1977) is of the opinion that the outcome of hepatitis in pregnant and non-pregnant female is same. The mortality of hepatitis in pregnancy is also low in the literature from U.S.A. and European Countries (Zondek and Bromberg 1947; Bornhanmanesh *et al* 1973). However, much higher mortality is reported by workers in India (Vishwanathan 1957; Malkani and Grewal 1957; Narayan Rao *et al* 1969; Upadhyay 1975; Gupta *et al* 1980).

This study was undertaken to evaluate the effects of hepatitis on the course of pregnancy in rural population of Marathwada.

## Material and Methods

This study was conducted during the year 1980, at S.R.T. Rural Medical

College, Ambajogai, a place situated in a rural population of Marathwada.

Thirty-two cases, (22 antenatal and 10 puerperal), admitted with the jaundice formed the subject for the present study. A detailed history, physical examination, routine hamatological and biochemical tests were recorded in each case. The diagnosis of viral hepatitis was based on the criteria of Davies *et al* (1968). An enquiry was made for the exposure to known hepatotoxins. Family history of jaundice in pregnancy was asked in every case. The immunoprophylaxis was not attempted in any case. Steroids were not used for the treatment. The hepatic coma was managed on conservative lines.

## Observations

Incidence of viral hepatitis in pregnancy observed during the year 1980, was 2.46% (32 cases out of 1300 deliveries conducted at this hospital).

## Maternal Age

Majority of cases belonged to the age group 21 to 30 years.

## Duration of Pregnancy

Majority of patients were admitted during the third trimester. There was no case during first trimester. (Table I).

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TABLE I  
Duration of Pregnancy at the Time of Admission

Duration	No. of cases
1st Trimester	0
2nd Trimester	4
3rd Trimester	28
Total	32

Duration of Symptoms

Most of the patients had symptoms for more than 1 week before admission. Only 4 cases had symptoms for less than 1 week (Table II).

TABLE II  
Duration of Symptoms Before Admission

Duration in days	No. of patients
1-7	4
8-14	12
15 and more	16
Total	32

Onset of Coma

Twentyfive cases (78%) out of 32 developed hepatic coma (Table III).

TABLE III  
Mortality in Relation to Coma

Prognosis	Coma	No coma	Total
Expired	21	0	21 (66%)
Survived	4	7	11 (55%)
Total	25 (78%)	7 (22%)	32 (100%)

Eleven (44%) cases developed coma after delivery, while 14 (56%) cases developed coma before delivery. Fifteen cases (28%) had gastro-intestinal bleeding along with hepatic coma.

Termination of Pregnancy

Out of 22 ANC cases, 18 delivered while 4 cases died before delivery. Including 10 puerperal cases, only 17 cases reached the full term. Four cases aborted and 7 cases had premature deliveries (Table IV).

TABLE IV  
Mode of Termination of Pregnancy and Fetal Wastage

Mode of termination of pregnancy	No. of cases	Fetal wastage
Abortions	4	4
Premature delivery	7	6
—Still birth	3	3
—Alive	4	3
FTND	17 (61%)	
—Still birth	7	7
—Alive	10	0
Total	28 (100%)	17 (60%)

Fetal Wastage

Out of 28 deliveries, only 10 resulted in full term live babies. Only 1 premature baby survived. Thus the fetal wastage was 60%.

Mortality

Out of 32 cases, 21 cases expired, due to hepatic coma (66%). Out of 11 cases which survived, 4 cases survived despite the development of coma. Seven cases did not develop coma. (Table III).

Liver Function Test

Majority of cases had high levels of S.G.O.T. Similarly majority of cases had very high bilirubin levels. The mortality was more in cases with high levels of S.G.O.T. and serum bilirubin (Tables V and VII).

TABLE V  
Relation of S.G.O.T. Level to Mortality

Level of S.G.O.T. I.U./100 ml.	No. of cases	Cases expired
50-100	7	0
101-150	3	0
151-190	22	21
Total	32	21

TABLE VI  
Relation of S. Bilirubin Level to Mortality

Level of S. Bilirubin Mg./100 ml.	No. of cases	Cases expired
0 - 5	2	1
6 - 10	4	1
11 - 15	7	5
>15	19	14
Total	32	21

### Discussion

Viral hepatitis is an important medical problem that complicates pregnancy in the third world. The incidence of hepatitis in our study is 2.46% of the deliveries conducted at our hospital. Vishwanathan (1957) has reported that the 5% of the pregnancies were affected in Delhi outbreak of viral hepatitis in 1955. Upadhyay (1975) ranked it as the chief cause of maternal death in southern India.

Most of the cases in our study belonged to the age group of 21 to 30 years which is the most susceptible age for viral hepatitis (Editorial 1970). All the cases were seen in 2nd and 3rd trimesters of pregnancy. Similar observation is made by Sama Kavita (1974). This is explained by the hormonal changes and the nutritional stress in late pregnancy. A chronic protein malnutrition and lack of essential aminoacids predispose to severe hepato-cellular damage.

The duration of symptoms before ad-

mission in majority cases was more than 1 week. Gupta *et al* (1980) observed it to be shorter in fatal cases. We did not find such correlation.

Hepatic coma developed in 25 cases (78%). Out of these, 11 (44%) developed coma after delivery and 14 (56%) developed it before delivery. Thus the onset of coma is unrelated to the onset of labour. However, death followed the onset of labour in majority of cases. Similar observation is made by Malkani and Grewal 1957; Narayan Rao *et al* 1969 and Gupta *et al* 1980.

The overall mortality observed in our study was 66%. Except Datta (1977) all the Indian studies observed a similar mortality rate. The reported mortality rates vary from 10 to 80%.

Out of the 28 delivered, only 61% were full term deliveries while 39% had premature labour, and the fetal wastage was 60%. Similar observation is reported in other studies from India.

The levels of S.G.O.T. and serum bilirubin were high in most of the patients and the mortality was higher in patients with severe abnormalities of liver functions. Gupta *et al* (1980) found higher serum bilirubin in fatal cases while enzymes were normal. Narayan Rao *et al* (1969) found no difference in fatal and non-fatal cases.

### Summary and Conclusion

Viral hepatitis was found to be a significant cause of maternal mortality and fetal wastage. Hepatic coma with gastrointestinal bleeding was the common mode of presentation. The incidence of premature labour was high and death followed the onset of labour in most of the cases. The treatment is unsatisfactory, termination of pregnancy is not advocated as the prognosis is poor even after termination

of pregnancy. The only hope of prevention is by immunoprophylaxis which is not possible in every case. Thus the picture of viral hepatitis continues to be gloomy inspite of therapeutic advances made in the management of hepatic coma.

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