

HEPATIC JAUNDICE DURING PREGNANCY

(A Study of 50 Cases)

by

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Introduction

Jaundice during pregnancy, particularly due to viral hepatitis is a serious malady being associated with high maternal and fetal mortality and morbidity (W.H.O., 1964). In recent times this problem has attained a prolific magnitude in the state of West Bengal in general and the city of Calcutta in particular. Large number of pregnancy cases with various degrees of jaundice are admitted into the hospitals both through the antenatal clinic and emergency room with increasing frequency. The following communication is based on the clinicopathological study of 50 hospitalised cases of pregnancy having jaundice, of whom 22 died inspite of treatment and 20 fatal cases had partial autopsy.

Material and Methods

All the 50 cases were admitted from August 1979 to November 1979 into Eden

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Hospital, Calcutta in various stages of pregnancy and degrees of jaundice. While 75% cases were admitted through the antenatal clinic, rest sought for emergency admission being critically ill. All these cases were provisionally diagnosed to have viral hepatitis. They had various degrees of prodromal symptoms characteristic of viral hepatitis such as fever, vomiting, anorexia, insomnia, passage-of high coloured urine and subsequent icterus. During this period a total number of confinements were 3416.

Routinely blood, urine and stool samples were tested and whenever possible liver function tests were done. Of 22 fatal cases, in 20 partial autopsy could be done. During hospitalisation patients were put on absolute bed rest and were encouraged to consume high carbohydrate, low fat, high caloric diet along with large quantities of fluids, adequate vitamins and antibiotics were administered and salt was restricted in the food when indicated.

All the 50 cases were analysed as regards their socio-economic status, age, parity, period of gestation, severity of jaundice, associated disorders, nature and result of termination of pregnancy when initiated therapeutically, maternal and fetal mortality and morbidity. The detailed results of histopathological studies

form the basis of a separate communication.

Observations

Socio-economic status

Of 50 patients, 26 belonged to low socio-economic groups, 17 to middle group and 7 to high income group. Mortality rate was high (about 61.5 per cent) in the low socio-economic group compared to much lower rate in middle and higher income groups (23.5 per cent and 14.3 per cent) respectively.

Age

Two-third of the patients were between the ages of 21 and 30 years. The youngest patient was 16 years and the oldest 35 years of age. Mortality rate was highest in the patients belonging to the third decade of life, i.e. 51.5 per cent compared 40 per cent in below 20 and 14.3 per cent in those above 30.

Parity

Parity-wise cases were evenly distributed as regards parity $P_0 + 0$, $P_1 + 0$, $P_2 + 0$ and $P_3 + 0$ group each accounting for 20 per cent of the cases. Only 5 patients (10 per cent) were para 3 + 0. The survival rate was low in all groups except primiparae. While in primiparae death rate was below 20 per cent, in all the other groups it was high, varying from 45 to 60 per cent.

Period of Gestation (Table I)

The most vulnerable period of gestation was between 29 and 36 weeks accounting for 28 cases, while below 28 weeks of pregnancy, 20 patients and over 36 weeks only 2 cases with jaundice were hospitalised. The patients belonging to from 32 to 36 weeks of gestation period had maximum death rate 12 out of 13 cases. (92 per cent).

Degree of Jaundice

The extent of jaundice was assessed both by clinical and biochemical parameters. While 18 patients manifested mild degree of jaundice, 27 and 5 had moderate and severe degrees of jaundice respectively. All the patients having mild degree of jaundice survived, but of 27 and 5 cases having moderate and severe jaundice respectively 18 (66.6 per cent) and 4 (80 per cent) cases died. Mild degree of jaundice was mostly encountered in primipara.

Associated Disorders: Anaemia of various degree and toxæmia of pregnancy in 12 cases and 10 cases respectively were detected. As the stay of the patients in the hospital in general was short and as all attention was focussed on saving the mother and the baby, detailed investigations to exclude other disease process could not be initiated in most of the cases.

Modes of Confinement and Their Results: (Table II): Of the 50 cases, half were deliberately terminated. The other half could not be terminated mainly due

TABLE I
Period of Gestation and Mortality Rate

Duration of pregnancy	No. of cases	No. of deaths	Percentage
Upto 28 weeks	20	5	25.0
29-32 weeks	15	5	33.3
33-36 weeks	13	12	92.1
36 weeks and above	2	—	—

TABLE II
Mode of Confinement and Ultimate Result

	No. of cases	Maternal death	Percentage
A—not confined	25	17	68
B—confined	25	5	20
Normal delivery	16	Nil	—
Forceps	2	Nil	—
LUCS	2	Nil	—
Premature delivery	5	Nil	—

to low general condition. In general, a successful confinement was associated with speedy recovery of the patients from jaundice. Of the 25 confined mothers only 5 died, while of 25 unconfined mothers 8 survived.

Sixteen cases delivered normally and in 2 cases each forceps and LUCS were the mode of confinement. In 5 cases with minimal effort premature confinement occurred. The modes of confinement did not alter the ultimate prognosis of the cases.

Autopsy Findings: Liver, kidney, spleen and placental bits from 22 cases were fixed, processed, sectioned, stained by haemotoxylin and eosin and were studied.

Liver: Widespread necrosis and regeneration of cells without normal orientation with periportal mononuclear cell infiltration indicated massive hepatic necrosis.

Kidney: Degenerative and necrotic changes of the tubules having abundant deposits of amorphous and granular bilious material, suggestive of cholemic nephrotic change, were the presenting features.

Spleen and Placenta: While in spleen inflammatory cellular deposits in patches were visualised, placental bits were devoid of any pathological changes.

Detailed histological assessment of the

tissue changes in liver, kidney, spleen and placenta is in progress.

Discussion

Incidence of hepatitis with manifested icterus during pregnancy varies in different geographical zones of India (Singh *et al* 1979), and the percentage is noted to be between 0.27 per cent and 2.8 per cent in various series (Phatak and Patil, 1956, Malkani and Grewal, 1957, Naidu and Vishwanathan, 1957). However, Singh *et al* (1979) recorded a much higher incidence i.e. about 8 per cent which can be accounted for as their findings were based on highly selective cases.

In our series of the 50 cases, 26 patients belonged to low socio-economic group living in most unhygienic state and were constantly exposed to polluted source of water. These poor patients mostly had moderate to severe degrees of jaundice (77 per cent) during hospitalisation, indicating apathy in general towards any disease state and lack of awareness about the damage associated with a state of jaundice during pregnancy in particular.

While Singh *et al* (1979) noted 5, 17 and 8 patients belonging to 1st, 2nd and 3rd trimesters of pregnancy, in our group 20 cases were below and 30 cases above 28 weeks of gestation. Moreover mortality rate which was 25 per cent upto 32

weeks, rose suddenly to more than 92 per cent thereafter. But both the almost full term cases (over 36 weeks) survived. It was also observed that during 32 to 36 weeks the association of anaemia and toxæmia was more frequent, making the expectant mother more vulnerable. Jaundice was observed to be more severe in 2nd and 3rd trimesters pregnancy by several observers (Peret *et al* 1959; Seigler and Keyser 1963; Morrow *et al* 1968). According to Singh *et al* (1979) patients in these periods of pregnancy seek more antenatal attention not only for severity of jaundice but also for other complications. So they have more chance of prompt hospitalisation.

In our series out of 27 and 5 cases in moderate and severe group respectively, 18 and 4 cases died while all the 18 patients having mild jaundice survived. As a rule primiparae had milder jaundice compared to parous women. This may probably be due to more alertness exhibited by the expectant mothers and her relatives during first pregnancy. Moreover, induction of labour was easy in patients having mild jaundice than those having moderate and severe jaundice as a result of low general condition. In 25 instances when confinement was successful, only 5 mothers died, while of 25 unconfined women 17 died. So the sooner the patient is admitted, treated and confined, the better is the prognosis.

Any complacent attitude towards hepatitis during pregnancy is thus to be highly deplored.

Age wise distribution of the cases in our series suggests prevalence of jaundice in pregnant stage during 3rd decade of

life. The greater prevalence in this period seems to be of minor significance as the overall fertility potentiality in this age group in our country is generally high. The mortality rate and faetal wastage was also more marked in this period of life. The lesser frequency of maternal deaths above 30 years of age may be due to the fact that most of the women in this age group belonged to higher income group, who sought for institutional care sooner.

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