

PREGNANCY OUTCOME IN HEPATIC COMA

JAI BHAGWAN SHARMA • NIRMAL GULATI

SUMMARY

A total of 13 pregnant women who were admitted in Medical College and Hospital, Rohtak for hepatic coma were studied. 11 patients and 12 babies died in this serious condition and only two patients and one baby could be saved showing a maternal mortality of 84.62% and perinatal mortality of 92.30%. Majority of patients came very late in the hospital when they were in advanced coma. Early hospitalisation and energetic treatment is recommended in all cases of jaundice during pregnancy to lower the incidence of this fatal condition.

Introduction

Hepatic coma during pregnancy is a serious condition carrying very high maternal and perinatal mortality.

Sheehan in 1940 first described obstetric acute yellow atrophy as a specific cause of jaundice in pregnancy. He distinguished it histologically from acute yellow atrophy, or fulminant hepatitis by the absence of liver necrosis in the presence of microvesicular fat within swollen hepatocytes with central nuclei and periportal spacing. His description is now known as acute fatty liver of pregnancy (AFLP). The first case report in 1934 is by Strander and Cadden. Tetracycline administration gives a similar clinical and histological picture in both non pregnant women and women at any stage of pregnancy (Peter et al, 1967).

Idiopathic AFLP, with rare exception, presents in last trimester of pregnancy. There is a rapid onset of malaise, nausea with repeated vomiting and abdominal pain followed by jaundice. Haematemesis often occurs and may be due to erosions, ulceration or even oesophageal varices (Duma et al, 1965) and is part of a bleeding diathesis which is often fatal. The baby is usually still born and following delivery, the mother lapses into deeper coma associated with hepatic and renal failure. The maternal mortality is between 78 and 85 percent (Carner et al, 1980; Scully et al, 1981) and is often from extrahepatic complications (Hatfield et al, 1972). The foetal mortality is of the order of 85 percent (Varner et al, 1980).

We present clinical features, investigations and management of 13 cases of hepatic coma admitted during pregnancy. Maternal mortality and perinatal mortality is discussed in these cases.

*Department of Obstetrics and Gynaecology,
Medical College and Hospital, Rohtak (Haryana)
Accepted for publication on 17/10/1989.*

Material and Methods

Present prospective study was carried out on 13 pregnant women admitted in Medical College and Hospital, Rohtak for hepatic coma. Age, parity, gestation, fetal weight, maternal mortality, perinatal mortality was studied in all the cases. Various signs and symptoms on admission, and before admission were noted and various biochemical tests including liver function tests were performed in all the patients to find out a correlation between them and severity of the condition.

Results

A total of 13 cases of hepatic coma complicating pregnancy admitted in Medical College and Hospital, Rohtak were studied for pregnancy outcome. Analysis of patients included in the present study revealed that maternal age ranged from 19 years to 37 years with mean being 24.0 years. Majority of the patients (69.23%) were still born, while another 3 died within one hour (PNM 92.30%).

Only one baby survived. Mode of delivery was spontaneous and induction was not done in any of the cases. Incidence of PPH was very high (69.23%) and it was responsible for some of the maternal deaths.

Analysis of symptoms and signs of the thirteen patients revealed that nausea, vomiting and malaise was present in all the cases. Anorexia was present in 61.54% and hematemesis in 30.72% cases, heart burn in 23.08% patients. There were no records of blood pressure in six cases while only two patients (9.11) gave definite history of hypertension. Jaundice was present in all the 13 cases and was present for 8 to 18 days (mean 12.6 days). Oedema, proteinuria and headache were seen in 10

cases, 5 cases and 2 cases respectively. There was history of antepartum haemorrhage in two patients (1 and 6).

Clinical examination findings in the patients on admission revealed that the majority of the patients were in grade 3 to 5 coma. Only two patients (5 and 8) were in grade I coma and both of them survived. Jaundice was present in all the cases and pulse was on faster side. 6 patients were hypertensive on admission. Pyrexia was seen in 3 cases. While 6 patients showed hepatomegaly or tender liver on examination, ten patients had edema, 5 had ascites, while 4 had malaena.

Various biochemical values of the patients are shown in Table I.

Serum bilirubin was higher than 20 mg/dl. in all the patients and ranged from 20 to 32 mg/dl (mean being 23.23 mg/dl).

Various hepatic function tests were markedly jeopardised and thus values of SGOT, SGPT, PTI and S.alk. phosphatase were markedly elevated (Table I).

Values of other biochemical parameters are shown in Table I.

Discussion

Hepatic coma during pregnancy can be caused by viral hepatitis, tetracycline toxicity, or idiopathic acute fatty liver of pregnancy (AFLP) and carries a very high maternal and foetal mortality. Varner et al (1980) reported maternal mortality of 75 percent while Scully et al (1981) found 80% maternal mortality in hepatic coma. However, Burroughs et al (1982) could find a very low maternal mortality rate (33.3 percent) in their series of 12 cases of acute fatty liver of pregnancy. This could be due to wide range of severity of illness in their series which also included less

TABLE - I
SHOWING VARIOUS BIOCHEMICAL VALUES

Patient No.	Hb gm%	Serum bilirubin	SGOT (IU)	SGPT (IU)	PTI sec.	Biochemical values			Uric acid mg%	Creatinine Mg%	Blood sugar	Sodium mEq/L	Potassium Eq/L	ESR mm in 1st hr
						Serum alkaline phosphatase	Albumin gm/lit.	Urea mg%						
1.	9	30	200	260	68	60	20	48	4.8	1.2	60	138	3.5	14
2.	8	28	190	250	60	30	24	52	5.2	1.4	64	148	3.7	18
3.	10	26	150	210	58	42	20	44	5.8	2.0	70	148	3.8	16
4.	9	25	140	220	48	28	28	40	6.8	1.8	72	150	4.0	14
5.	11	21	180	260	24	24	32	17	3.8	1.2	55	140	2.5	12
6.	8.4	32	140	210	50	32	20	35	4.2	1.4	60	138	2.80	12
7.	7.8	28	150	220	48	48	22	40	5.2	2.0	68	140	2.8	14
8.	10.8	20	170	240	25	25	35	20	4.0	1.0	55	140	2.8	14
9.	11.2	26	160	210	28	60	18	42	7.2	1.2	72	140	3.0	18
10.	10.4	32	150	220	32	58	18	60	6.8	1.4	80	138	3.2	16
11.	9.5	31	110	200	34	48	22	64	7.4	1.6	60	140	3.2	16
12.	9.8	28	70	180	70	46	24	58	6.8	1.8	68	138	2.8	18
13.	8.8	30	100	210	68	44	26	54	5.8	2.0	58	136	2.8	12

severe cases.

Sheehan's two series comprising 15 patients of AFLP are the largest and only one patient survived in his series (Sheehan, 1961). Our study comprised of 13 cases of hepatic coma and only two patients survived (maternal mortality of 84.61%). This could be due to serious patients in our study who came very late and were already in coma grade 3 to 5. Unfortunately liver biopsy was not done in any of the patients, so exact cause of hepatic coma cannot be given. Perinatal mortality of 85 percent has been observed by Varner (1980). However, a lower PNM of 66.7 percent was observed by Burroughs et al (1982). We found a very high perinatal mortality (92.30 percent) in our study. This could be due to late admission of our patients when the baby was already dead or severely jeopardised. Thus 9 babies were still born and 3 died within an hour of birth. Only one baby (case No.8) could survive along with his mother. This could be due to grade I coma in this patient.

Incidence of postpartum haemorrhage was more common in our study (69.23 percent) than Burrough's study (50%). Two of our patients (case No.1 and 7) had D.I.C. and died due to excessive bleeding only.

All the patients had hyperbilirubinaemia in absence of demonstrable haemoly-

sis which is in contradistinction to pre-eclampsia or eclampsia where jaundice rarely occurs except when haemolysis is present (Sheehan, 1961).

Early delivery by caesarean section has been advocated as improving maternal and fetal survival and arresting the disease (Peters et al, 1967). Burroughs et al (1983) also observed increased maternal and foetal survival by urgent delivery. However, the risk of anaesthesia and those of bleeding from the operative field are factors against it. In our study labour was spontaneous and mode of delivery was vaginal.

References

1. Burroughs, A.K., Seong, N.G.H., Dojciwov, D.M., Scheuer, P.J., Sherlock, S.V.P.: *Q.M.J.* 204:481, 1982.
2. Duma, R., Dowling, E., Alexander, H., Sibrans, D., Dompsey, H.: *Ann. Intern. Med.* 63:851, 1965.
3. Hatfield, A., Stein, J., Greenberger, N., Abernethy, R., Ferris, T.: *Dig. Dis.*, 17:167, 1972.
4. Peters, R., Edmondson, H., Mikkelsen, W., Tatter, D.: *Am J. Surg.* 113:622, 1967.
5. Sheehan, H.: *J. Obstet. and Gynec. of Brit. Empire*, 47:49, 1940.
6. Sheehan, H.: *Jaundice in pregnancy. Am. J. Obstet. Gynec.* 81:427, 1961.
7. Strander, H., Cadden, J.: *Am. J. Obstet. Gynecol.* 28:61, 1934.
8. Scully, R., Galdbini, J., McNeely, B.: *N. Engl. J. Med.* 304:216, 1981.
9. Varner, M., Rinderknecht, N.: *J. Reprod. Med.* 24:177, 1980.