CIRRHOSIS OF LIVER

Report of 5 cases

by

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Cirrhosis of the liver complicating pregnancy is unusual because of the abnormal steroid metabolism, resulting in anovulatory menstrual cycles and sterility. Pregnancy is allowable in cases with fairly compensated liver function but it is not advisable in patients with cirrhosis of liver (Moore & Hughes). Pregnancy does not alter the course of liver disease materially—if liver function in cirrhotics is compensated.

In a review of cases of cirrhosis of liver in pregnancy, Iber found 50 cases of pregnancies lasting for six months or more, Richman 19 cases. Sunandabai—1 case and Slaughter and Krantz 27 cases. Zondek had two cases with chronic hepatitis as a sequel to acute infective hepatitis. Moore and Hughes reviewed 23 pregnancies in 20 patients. In our country an increasing frequency of post-necrotic cirrhosis of the liver is likely in young women with malnutrition and protein deficiency, when recovering from infective hepatitis. During the period 1965 to 1968, 5 cases of cirrhosis of the liver complicating pregnancy were diagnosed and treated at the Government General Hospital, Kurnool, giving an incidence of 1 in 1081 deliveries. In this area, infective hepatitis is endemic, with an epidemic in 1967 resulting in admission of 32 cases in pregnancy and labour.

In view of the rarity of this condition, these 5 cases are reported.

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Case 1

Mrs. Y, aged 25 years, gravida 7, para 6, was admitted on 24-12-1965 with amenorrhoea of 9 months and distension of the abdomen and breathlessness since two months.

Obstetric History

First delivery—full term still birth. She had distension of abdomen 5 months after the delivery which was relieved after 2 months.

Second delivery—full term natural labour, baby alive ascites was noticed 4 months postpartum.

Third delivery—full term normal labour —live baby. Ascites present postpartum.

Fourth delivery—full term stillbirth. Ascites present 3 months postpartum.

Fifth delivery—full term—stillbirth. Ascites from 7th month of pregnancy and up to 3 months postpartum.

Sixth delivery — full term — stillbirth. Ascites from 3rd month of pregnancy and jaundice a few days before delivery were present.

Investigations: HB 8 G%; R.B.C. 3.4 mil/cmm.; E.S.R. 98 mm/hour; W.B.C. 7,400/cmm.; blood pressure—120/180 mm Hg; height 4'-10"; weight 105 lbs. on admission;—80 lbs. on 5-1-'66. 27-12-65 Van den Berg direct positive, serum bilirubin 3.3 units; thymol turbidity (T.T.T)—5 units; blood cholesterol 95 mg%. 8-1-66—bleed-

ing time, 10 mins. Platelets, 55,000 per c.mm; clotting time, 8 minutes. 10-1-1966—Serum alkaline phosphatase 7 KA units, serum proteins—5.48%; albumin 2.7G%; globulin 2.74%; blood urea—37 mg%. 5-1-1966 Van den Berg direct positive, Serum bilirubin 2 units, T.T.T. 4 units.

On examination:—She was anaemic and jaundiced, and ascites and oedema of the feet were present. The abdominal wall was oedematous, with prominent veins, the blood flowing towards the chest. The spleen was enlarged and hard, three fingers below the costal margin, and the liver was not palpable. On palpation the uterus was of 36 weeks' size, with vertex presentation, and the foetal heart sounds were present. She had a premature labour on 30-12-1965 with delivery of a dead foetus, weighing 1.89 kgs. As she was anaemic, transfusion of one unit of blood was given. She had marked ascites, subcutaneous echymosis and clubbing of fingers. She had diarrhoea on 7-1-1966, subconjunctival haemorrhages on 10th and drowsiness and mental confusion on 11th. She died on 12-1-1966. A post-mortem biopsy of the liver was reported as cirrhosis of the liver (Fig. I).

Treatment given: Hydrochlorthiazide 50 mg a day, Imferon 100 mg daily, Mersalyl 2 cc intramuscularly, intravenous glucose and vitamin B complex. From 1-1-1966, Achromycin 250 mg six hourly. From 7-1-1966, Prednisolone 25 mg thrice a day and Mexaform tablets 5 mg thrice a day were given.

Case 2

Mrs. J, was admitted on 19-4-1967 with the complaint of distended abdomen for two months and amenorrhoea of seven months. She was aged 40 years, gravida 10, para 8.

Obstetric history:—She had normal full term deliveries; her last delivery was 2½ years ago. She had oedema of feet 3 weeks before the last delivery; the puerperium was normal.

On examination—she was anaemic and jaundiced and had marked oedema of legs (for four months). The abdomen was distended with ascites, the spleen was enlarged and hard, 4″ below the costal margin and the liver was palpable. The height of the uterus was 28 weeks, and foetal parts were palpable. On 15-5-1967 she had a natural premature labour with delivery of a live female foetus weighing 1 kg.

On 20-5-1967, paracentesis was done and on 4-6-1967 she was discharged at request, relieved of her symptoms.

Investigations: Weight—110 lbs; HB 6.5 Gm%; R.B.C. 2.4 mil; E.S.R. 135 mm; W.B.C. 7200; serum proteins 3.5%; blood pressure 110/80 mm Hg. 20-4-1967—Van den Berg direct positive, serum bilirubin 5 mg%; thymol turbidity—4 units. On 6-5-1967, Van den Berg direct positive, serum bilirubin—2 mg%; thymol turbidity—3 units. 26-5-1967, bilirubin—8 mg%, thymol turbidity—5 units.

Treatment

Tetracycline—250 mg. six hourly, Mersalyl 2 cc daily, aminophyllin — intravenously, digoxin 1 tablet six hourly, prednisolone 5 mg and casilan (Glaxo). Her jaundice disappeared 5 days before discharge, but oedema of legs and ascites were still present.

Case 3

Mrs. A, aged 25 years, gravida 2, para 1, was admitted on 19-3-1966 with amenorrhoea of nine months and oedema of the whole body and headache since one week.

Obstetric history:—She had a premature labour, induced by artificial rupture of membranes for pre-eclampsia at 38 weeks 1½ years ago and had a live baby. She had jaundice lasting for six weeks 5 years ago which was treated in the hospital as infective hepatitis.

On examination—she was anaemic with stomatitis and glossitis. She had jaundice and mild ascites. The height of the uterus was of 34 weeks' pregnancy and the presentation was cephalic. On 22-3-1966, she had slight bleeding per vaginam and labour was induced by artificial rupture of membranes and a syntocinon drip in 5% glucose intravenously, with delivery of a live baby weighing 2 kg. She was given a transfusion of 300 cc of 'A' group blood. On 23-3-1966 she was drowsy but replying to ques-

tions. She complained of pain in the epigastrium and had vomiting and tenderness in the right hypochondrium and tremors. She was drowsy, irritable and dyspnoeic on March 24th 25th and 26th. On 27th, she was comatose and had distension of abdomen and cold extremities, with pulse 130 per minute, temperature 101°F and blood pressure 80/60 mm. Hg. Six hundred cc. of brown fluid was aspirated from the stomach. She had noradrenaline with I.V. glucose from 26th to 29th March and she was conscious on 28-3-1966. On 30-3-1966 she was deeply jaundiced and had diarrhoea with dehydration and drowsiness. On 31-3-1966 she had parotitis on the right side and thrombophlebitis of the left leg. On 5-4-1966 abscesses of both parotid glands were incised, generalised oedema was present and abdominal distention was less. She was conscious, with improvement in the general condition. On 18-4-1966 she manifested psychosis but was conscious. She was discharged cured and baby well on 22-4-1966.

Investigations—Blood pressure—130/90 mm Hg.; weight 107 lbs; Hb—10 gm% on 20-3-1966 and 7 gm% on 9-4-1966. Blood urea on 21-3-1966—20 mg% and on 29-3-1966—100 mg%; 27-3-1966, Van den Berg direct positive, serum bilirubin 10 mg; thymol turbidity—1 unit; 9-4-1966; bilirubin 2.0 mg; thymol turbidity—1 unit; urine —urobilinogen was present on 25th and 29th. R.B.C.S. and granular casts present in urine on 29th March, 1966.

Treatment given: Intravenous glucose; cortisone 25 mg six hourly, Achromycin—100 mg intramuscularly twice a day for one week and Efcorlin 100 mg. eight hourly from 25-3-1966, for five days, later 25 mg thrice a day for a week. Chloromycetin 250 mg intramuscularly twice a day from 31-3-1966 for six days. Hydrochlorothiazide daily since admission. On 14-4-1966 Vit. B1, B complex, Vit. C and Mycostatin orally for treatment of stomatitis were given. Siquil, 10 mg B.D., for treatment of psychosis.

Case 4

Mrs. R, aged 38 years, 5th para, was admitted on 5-4-1968 with complaints of oedema of legs, breathlessness and weakness.

Obstetric history:—She had three normal deliveries in her house. She was admitted in the medical ward of Government General Hospital, Kurnool 6 years ago for treatment of oedema and ascites for one month. 4th delivery—5 years ago, full term, normal labour in hospital; child alive, but died three years later. She was in the antenatal ward of the General Hospital, Kurnool, from the 5th month of pregnancy for treatment of oedema. 5th delivery—10 days ago at full term; normal labour at home. Child was alive and weighed 2.4 kg. She had oedema of legs from the 5th month of pregnancy.

Condition on admission:—She was markedly anaemic with generalised oedema and ascites. Her blood pressure was 110/70 mm Hg; Hb. 2.5 Gms.% (Sahli). Liver was not palpable but spleen was enlarged and firm, extending 3 fingers below costal margin.

Investigations:—E.S.R. 90 mm; R.B.C. 1.1 millions per cmm.; W.B.C. 6,600 per cmm. Serum proteins 5.3 G%; albumin: globulin 2.8:2.5; serum Van den Berg negative; bilirubin 1.3 mg; thymol turbidity test—3 units; weight, 45 kgs. Liver biopsy done on 2-5-1968 showed evidence of cirrhosis of the liver.

Treatment:—Imferon 2400 mg.,—diuretics (Lasix) and aminophpylin daily; high protein diet, folic acid and liver extract. Blood transfusion was given on 3-5-1968. She was discharged relieved on 9-5-1968 with mild oedema of legs.

Case 5

Mrs. N, aged 25 years, 8th para, was admitted on 12-12-1968 with complaint of distension of abdomen and swelling of feet since 1 month.

Obstetric history:—All the eight deliveries were normal, at her home, at full term. Five children were alive. She had the above cited complaints during her seventh pregnancy in the ninth month and in her eighth pregnancy, 15 days preceding delivery.

Condition on admission:—She was ill-nourished, anaemic with marked ascites and oedema of feet, and enlarged spleen

TABLE I
Showing clinical features

Case No.	1	2	3	4	5
Age (years)	25	40	25	38	25
Parity	6	8	1	5	8
Duration of pregnancy—Wks.	36	28	36	40	136a
Past history of Ascites	+	+	Nil	+	
Mental condition	Drowsy	Toxic	Coma	Normal	Com
Jaundice	+	+	+	—	+
Splenomegaly	+	+	+	+	+
Liver enlargement	—	+	—	—	—
Ascites	+	+	+	+	+
Oedema of legs	+	+	+	+	+
HB% G	8	6.5	7	2.5	7.5
Serum protein G %	5.5	3.5	..	5.3	5.1
Stay in the hospital (days)	48	45	33	34	28
Foetus	Dead	N.N. death	Alive	Alive	Alive
Weight of foetus in Kg.	1.89	1	2.1	2.87	?

3" below costal margin. Liver was not palpable and abdominal circumference at level of the umbilicus was 34".

Investigations

Haemoglobin 7.5%; R.B.C. 2.3 millions per cmm; blood pressure 120/68 mm Hg.; serum proteins 5.1 G%. 13-12-1968 serum Van den Berg test—bilirubin below 1 mg% thymol turbidity test—4 units. On 30-12-1968 she complained of pain in the chest and breathlessness and on 3-1-1969 she was comatose with presence of jaundice. The physician found her in hepatic coma on 4-1-1969 due to cirrhosis of the liver with hepatocellular failure. In spite of treatment with diuretics and parenteral glucose, she expired on 10-1-1969.

Autopsy was done on 15-1-1969 revealing cirrhosis of liver with coarse, nodular surface, oesophageal varices, gross splenomegaly, ascites, anaemia and icterus.

Histological section revealed typical post necrotic cirrhosis of liver (Fig. 2).

Discussion

In his review, Iber concluded that frequency of abortion was increased, and aggravation of disease was unusual because of remission due to treatment given in pregnancy and that maternal deaths occurred due to haemorrhages from oesophageal varices. Of Slaughter and Krantz's 27 mothers with cirrhosis of the liver, 4 patients died, 2 became worse because of pregnancy and 8 deliveries were premature. The complications of liver disease were more prominent during pregnancy due to fluid retention resulting in ascites and oedema which were more difficult to manage, as in our case No. 2. Jaundice was more marked in the last trimester due to hormone influence on excretion of bilirubin with delay, as found in our first, second and third cases. Worsening of portal hypertension with hyper-volaemia contributes to rupture of varicosities in the oesophagus with risk of haemorrhage and death.

More cases of cirrhosis of the liver with portal hypertension are likely to live with compensated liver function and associated pregnancy. Like heart disease, pregnancy and delivery impose additional work on the liver with a shorter life expectancy. Moore and Hughes, in a review of 20 patients, found symptoms of ascites and oedema due to hypoalbuminaemia worsened in pregnancy and more marked palmar oedema and

spider naevi. In their 17 cases, all except four were diagnosed by liver biopsy or by visualising the liver directly at laparatomy. Of the 5 deaths, 2 died of varices, 1 of post-splenectomy haemorrhage, 1 of liver failure and 1 was an intrapartum death.

Richman states that diagnosis was made by liver biopsy in 12 cases and by clinical findings in 7 cases. Iber states that if liver failure is present, treatment is given as in infective hepatitis. In early pregnancy evaluation of oesophageal varices and keeping portal hypertension minimum by treatment, as in pre-eclampsia, with diuretics and sodium poor diet and a radiology of oesophagus were advised by Iber. There was no indication for termination of pregnancy in compensated cases as they are not worse by carrying pregnancy to term. If liver failure is present in the first trimester with jaundice and there is a risk of rupture of oesophageal varices, termination of pregnancy is required (Iber).

In our series of five cases, 4 had jaundice, oedema of legs and ascites, showing failure of liver function and fluid retention with electrolyte disturbance. In the fifth case, anaemia, enlarged spleen, ascites and oedema of legs were present, suggestive of cirrhosis of liver. The first case (No. 1) died of chronic hepatic failure following premature labour; a history of 15 years' duration of cirrhosis was present. Diagnosis by biopsy of liver was confirmed postmortem. In the second case (No. 2), as marked oedema and ascites with jaundice were not relieved by the usual treatmen, the medical practitioner referred her to the hospital and she was discharged with persistent clinical features postpartum. Case No. 3 had infective hepatitis five years ago and premature labour with pre-eclampsia 1½ years ago, and now presented with ascites, joundice and oedema suggestive of hepatic failure. She had mental changes like drowsiness, coma and irritability, fluid retention with oliguria, distended abdomen, vomiting and nausea. She had a critical and stormy period for a week with hypotension and was treated by noradrenaline drip and Ryle's tube feeding for 4 days. Case No. 4 was treated in the medical wards for cirrhosis of liver with ascites and oedema of legs six years before. Now she was admitted on the 10th day postpartum with severe anaemia, ascites and oedema of the body. Liver biopsy was done after treating the anaemia to confirm the diagnosis and she was discharged relieved after 34 days. Case No. 5 was admitted in the hospital, 15 days after birth of a live premature baby at her house, with ascites and splenomegaly. After treatment for 20 days) she became comatose with deepening icterus and died 7 days later. Autopsy revealed a typical, coarse nodular, liver, and oesophageal varices.

Three patients had premature labours, with babies weighing 1.89 kg., 1 kg. and 2.1 kg. Of the five babies, one was stillborn, one had neonatal death and 3 were alive. All the patients had hypoproteinaemia with oedema and ascites and were economically poor with malnutrition. Patient No. 3 showed marked glossitis with Vit. B complex deficiency. All the cases were anaemic

with a haemoglobin of 8 G%, 6.5 G%, 7 G%, 2.5 G% and 7.5 G%. Two of the five cases were fatal (i.e. 40% mortality) due to hepatic failure.

Summary

Five cases of cirrhosis of the liver, 4 with hepatic failure, jaundice and ascites and 1 with ascites, oedema and splenomegaly are reported. In the two fatal cases, the diagnosis was confirmed by biopsy of the liver. One of the premature babies died and one was dead born. Clinical features and diagnosis are discussed.

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Figs. on Art Paper V