

Study of Feto-Maternal Outcome in Pregnant Females with Infective Hepatitis

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Abstract

Objectives: To study the clinical course, morbidity and mortality in the pregnant patients affected by the disease, To study the effect of Infective hepatitis on outcome of pregnancy. **Material & Method:** The present study was undertaken at New Civil Hospital, Surat. The time period was of 6 months i.e. from January 2017 to June 2017. All pregnant females having infective hepatitis were included, Pregnant females having other diseases and condition which resembles the clinical presentation of viral hepatitis were excluded. **Summary:** (1) Incidence of viral hepatitis in pregnant women in the present series was 1.21, (2) Total maternal mortality is 2 cases in the analysis of 50 cases i.e. mortality 4%, (3) Mortality is higher during second trimester (16.6%) as compared to first and third trimester, (4) Higher mortality in delivered patients (4.54%), (5) Fetal wastage was more in patients having viral hepatitis (6%)abortion. 10% still birth, 48% pre-mature birth. **Conclusion:** Infective hepatitis is a potentially devastating disease. In pregnancy maternal morbidity and mortality is severe and the infection exerts a significantly negative effect on perinatal outcome. The early diagnosis and prompt initiation of therapy are of utmost importance in reducing the risks of serious maternal and fetal complications. In present study multigravida

constituted 64% and primigravida 36% maximum cases were admitted in III trimester (34 out of 50 cases). The high rate of abortion (4/50 cases), premature labour (6/50 cases) and still birth (10/50 cases) may be due to indirect effect of disease, hypo-proteinemia and excess of estrogen in circulation which sensitizes the uterus to oxytocin and prostaglandins.

Keywords: Primigravida; Hepatitis.

Introduction

The disease called epidemic infectious hepatitis has been known to mankind from early ages. Hippocrates (5th century B.C) has given the earliest records of the disease. The disease has been prevalent throughout the world and through the centuries in different grades of endemicity.

Nowadays because of growing urbanization, modernization and industrialization there is increase in migration, need for transport. This has led to transport of disease as well. This has produced the necessity of having complete knowledge regarding different diseases- Hepatitis, Malaria, Filariasis, Leishmaniasis in different countries and continents. Countries where these infections are endemic or epidemic, pose a vast problems to the economic development. Hence the need to have knowledge of these infections with regards to their incidence, clinical features, course and management.

In the developing countries majority of the population lives in the rural area or shanty town or urban slums with inadequate supply of safe water, sanitation and sewage and refusal disposal. Medical facilities, primary

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health care, regional and referral centers are inadequate due to limited financial resources. Further problem arises from tribal or ethnic customs and prejudice in relation to diet, food preparation, traditional medicines, large family size due to lack of, or in spite of education. Increase in prevalence of these diseases is also due to rapid increase in industrialization in developing countries causing migration and aggregation of job seekers from different parts of the country with different endemic condition of the disease. This causes highly vulnerable situation resulting in outbreak and further dissemination of the causative organism nullifying the achievement in control of the disease in those areas.

Pregnancy is usually a time of pleasant anticipation and experience that terminates on a happy note. The course of physiological changes of pregnancy can be highly modified to pathological ones by the virus of infective hepatitis. Liver plays an important role in metabolism and derangements following viral infections are marked and they produce severe repercussions on the body as a whole and pregnancy in particular especially if the condition goes unrecognized and untreated by the physician.

The work done so far in India mainly concerns epidemic hepatitis in pregnancy. In 1957, from India, Malkani and Grewal [25] reported the incidence 1:50 pregnancy and mortality 35.5%.

The outbreak of epidemics occurred throughout India at different times. In 1955-56 at Delhi (HEV), 1959 at Bombay (Plague), 1994 Surat (plague), 2009 Modasa (Hepatitis B) and 2014 Odisha (HAV & HEV).

Looking at the reported increased mortality among pregnant patients with liver disease especially in tropical and under developed countries and the fact that viral hepatitis is an important and common disease in pregnant patients inspired me to select this subject as a topic of my paper presentation.

Aims & Objects of Study

1. To study the clinical course, morbidity and mortality in the pregnant patients affected by the disease,
2. To study the effect of duration of gestation on infective hepatitis and its relation with mortality,
3. To study the effect of Infective hepatitis on outcome of pregnancy.

Inclusion Criteria

All pregnant females having infective hepatitis.

Exclusion Criteria

Pregnant females having other diseases and condition which resembles the clinical presentation of viral hepatitis e.g. exposure to drugs and toxins known to induce liver disease, acute fatty liver and eclampsia

Material & Method

The present study was undertaken at New Civil Hospital, Surat. The time period was of 6 months i.e. from January 2017 to June 2017. Pregnant Subjects who attended the emergency labour room and Antenatal OPD with history suggestive of hepatitis and admitted in antenatal ward, and some were later transferred to Medical ward. Pregnant Subjects directly admitted to infectious disease ward were also studied. The cases were studied and observed according to the proforma. Detailed history of patients were taken and thorough clinical examination was carried out.

Detailed menstrual history was elicited regarding past menstrual history and last menstrual date. Detailed obstetric history was elicited regarding previous pregnancy, last delivery, any abortion or preterm delivery. History of taking any medication for termination of pregnancy.

Then complete clinical & obstetrical examination were carried out. After that patient were subjected to routine antenatal investigations with LFT, RFTS, Electrolytes, Viral markers & USG .

Then the cases were followed up to term and also in early perinatal period to study foetal outcome later on.

After delivery baby was examined for maturity and for any elements of low birthweight , IUGR or any other perinatal complications.

Observation and Discussion

Table 1 shows the incidence of Infective Hepatitis in pregnancy admitted in NCHS during my study period. Out of total 4129 patients admitted for all the causes 50 had Infective Hepatitis. Out of 50 cases 2 cases died, thus mortality amongst cases with Infective Hepatitis was 4%.

As evident in Table 2 that 36% of subjects were primigravida and 64% of subjects were multigravida

As shown in table 3, 34 (68%) cases were in third trimester, 12 (24%) cases in second trimester and 4 (8%) cases were in first trimester.

Table 4 shows that four subjects who developed Infective Hepatitis is in first trimester none expired. Out of 12 subjects in second trimester 2 (16.6%) expired. Out of 34 subjects in third trimester none expired. Thus there is relatively higher mortality in second trimester in our study.

Table 5 shows that all in this study 50 cases had the symptom of icterus. Majority had history of prodromal symptoms-anorexia, nausea, fever, vomiting and abdominal pain being the most common in order of frequency. Yellow discoloration of urine was reported by 60% of cases. Bleeding episodes in the form of epistaxis and Haemetemesis was less frequent symptoms.

Table 6 show depicts that out of 50 Patients, 6 (12%) remained undelivered, 3 (6%) aborted, 5 (10%) had still born babies, 24 premature birth and 12 had full term normal delivery.

Table 7 shows foetal outcome in subjects with Infective Hepatitis. There is high incidence of preterm delivery in subjects with Infective Hepatitis.

Table 8-9 shows that majority of the cases faces the coagulopathy as a complication (30%) which was managed by component therapy, 5 subjects of atonic PPH were managed by medical management along with uterine packing, 2 subjects of traumatic PPH had cervical tear which was bleeding actively and was sutured and packing was done under anaesthesia.

Table 1: Incidence of infective hepatitis in pregnancy

Total No. of patients	Patients having Infective Hepatitis	Mortality due to Infective Hepatitis	Incidence of Infective Hepatitis
4129	50	02	1.21%

Table 2: Relation of Gravidity with Infective Hepatitis

Gravidity	No. of Cases	Percentage
Primigravida	18	36 %
Multigravida	32	64 %

Table 3: Relation of Trimester of pregnancy with Infective Hepatitis

Trimester	Cases	Percentage
1 st	04	8 %
2 nd	12	24 %
3 rd	34	68 %

Table 4: Relation of trimester of Mortality in Infective Hepatitis

Trimester	Non Fatal	Fatal	Total
1 st	04(100%)	00	04
2 nd	10(83.4%)	02(16.6%)	12
3 rd	34(100%)	00	34

Table 5: Symptomatology of subjects having Infective Hepatitis

Symptoms	No. of Cases	Percentage
Icterus	50	100%
Dark urine	40	80%
Anorexia	30	60 %
Nausea/ Vomiting	40	80 %
Fever	20	25 %
Malaise	15	30 %
Pain in abdomen	20	40 %
Convulsion	01	2 %
Haemetemesis	01	2 %
Itching	05	10 %
Epistaxis	00	00
Clay coloured stool	10	20 %
Headache	05	10%
Diarrhoea	05	10%
Altered sensorium	02	4 %

Table 6: Obstetric outcome in Infective Hepatitis

Outcome	Total no. of Cases	Nonfatal cases	Fatal cases	Percentage
Aborted	03	02	01	6%
Still born-Preterm	04	04	00	08%
-term	01	01	00	02%
Live born- Preterm	24	23	01	48 %
Term	12	12	00	24%
Undelivered	06	06	00	12 %

Table 7: Fetal outcomes in cases with Infective Hepatitis

Fetal Outcome	Percentage
Still born	12.3%
Premature- Live birth	58.5%
-Early neonatal death	
Mature- Live birth	29.2%
-Early neonatal death	

Table 8: Mode of delivery

Mode of Delivery	Non Fatal	Fatal	Total
PTVD	27	01	28
FTVD	10	00	10
LSCS	03	00	03

Table 9: Percentage of complication arising in subjects with Infective Hepatitis

Complications	No. of cases	Percentage
PPH - Atonic	05	10%
Traumatic	02	04%
Coagulopathy	15	30%
Hepatic Encephalopathy	02	04%

Table 10: Infective Etiologies

Virus	No. of Cases	Percentage
HAV	06	12%
HBV	10	20%
HCV	00	00
HEV	34	68%
HDV	00	00

Table 11: Infective etiologies and Mortality

Virus	Non fatal cases	Fatal cases	No. of cases
HAV	06 (100%)	00	06
HBV	10 (100%)	00	10
HCV	00	00	00
HEV	32(94%)	02(06%)	34
HDV	00	00	00

Table 12: Obstetrics outcome and perinatal mortality in subjects with Infective Hepatitis

Author	No. of cases	Premature infants (%)	Still birth (%)	Neonatal death (%)	Perinatal mortality (%)
Roth ⁽²²⁾	16	0	3 (18.75)	0	18.6
Malkani&Grewal ⁽²⁵⁾	149	78(52.35)	18 (12.08)	30 (20.13)	32.2
Present study	50	24 (48)	05 (10)	5 (10)	10

As shown in table 10 majority of cases were infected with Hepatitis E virus (68%).

Table 11-12 shows the obstetrics outcome in pregnant subjects with Infective Hepatitis by various authors and the same has been compared with present study. Malkani and Grewal [25] reported 78 (52.35) premature infants, 18 (12.08) still births and 30 (20.13) neonatal death. Other authors also reported similar findings. Present study also showed similar readings.

Summary

1. Incidence of viral hepatitis in pregnant women in the present series was 1.21
2. Total maternal mortality is 2 cases in the analysis of 50 cases i.e. mortality 4%
3. Mortality is higher during second trimester (16.6%) as compared to first and third trimester
4. Majority of patients had common prodromal symptoms in the form of anorexia (60%), nausea/vomiting (80%), fever (25%), vomiting (30%) and abdominal pain (40%)
5. Higher mortality in patients who are in altered consciousness at the time admission (4%)
6. Higher mortality in delivered patients (4.54%)
7. Fetal wastage was more in patients having viral hepatitis (6% abortion, 10% still birth, 48% premature birth)
8. Anaemia was very much prevalent in study group (86%).

Conclusion

Infective hepatitis is a potentially devastating disease. In pregnancy maternal morbidity and mortality is severe and the infection exerts a significantly negative effect on perinatal outcome. Since the disease is preventable, we must be acquainted with its epidemiology and clinical picture. Lack of obstetrician's awareness delays the correct diagnosis of viral hepatitis, which in turn may lead to serious consequences. The early diagnosis and prompt initiation of therapy are of utmost importance in reducing the risks of serious maternal and fetal complications.

In present study multigravida constituted 64% and primigravida 36% maximum cases were admitted in III trimester (34 out of 50 cases). The high rate of

abortion (4/50 cases), premature labour (6/50 cases) and still birth (10/50 cases) may be due to indirect effect of disease, hypo-proteinemia and excess of estrogen in circulation which sensitizes the uterus to oxytocin and prostaglandins.

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