Original Research Article

Indian Journal of Obstetrics and Gynecology
Volume 6 Number 3, May - June 2018
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.6318.10

Study of Socio-Demographic Factors in Pregnancies with Infective Hepatitis

Nilam Prajapati[1], Anjani Shrivastava[2], Bhavika Gamit[3]

Abstract

Objectives: To study socio-demographic factors related to Feto-maternal outcome in pregnancies with infective hepatitis. *Materials and Methods:* This observational study was carried out in department of Obstetrics and Gynaecology, in our institute, enrolling 50 subjects from January 2017 to June 2017 who attended the emergency labour room and Antenatal OPD with history suggestive of Infective Hepatitis and admitted in Antenatal ward, and some were later transferred to Medical ward . All pregnant women with Infective Hepatitis were selected, all their details entered in preformed, effective interventions were recorded. *Conclusion:* Maximum cases of Infective Hepatitis were found in registered subjects with age group of 21-25 years, who were urban area, poor socio-economic class. *Results:* Out of 50 subjects of infective hepatitis subjects from referred subjects from rural area and low socioeconomic area between age group of 21-25 years have higher rate of mortality.

Keywords: Pregnancies; Infective Hepatitis.

[1]Assistant Professor,
[2]Associate Professor,
[3]Third Year Resident, Dept. of Obstetrics and Gynecology, New Civil Hospital, Surat, Gujarat 395001, India.

Corresponding Author:
Bhavika Gamit
Third Year Resident, Dept. of Obstetrics and Gynecology, New Civil Hospital, Surat, Gujarat 395001, India.
E-mail:
bhavi1410@gmail.com

Received on 06.03.2018,
Accepted on 11.04.2018

Introduction

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 health care, regional and referral centres 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 inspite 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 seeks form 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. Individual government had neither money nor personnel nor expertise to surmount these problems.

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.

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.

Objectives

To study the demographic factors related to Feto-maternal outcome in pregnancies with infective hepatitis.

Subjects and Methods

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.

Inclusion Criteria

All consenting pregnant women presenting with Infective Hepatitis to NCHS.

After overall evaluation if they fulfilled the following criteria they were included in study:

- Recent onset of jaundice with conjugated hyperbilirubinaemia.
- Serum transaminase levels greater than or equal to 40 u/dl.
- Exclusion of 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 were ruled out.

Subjects were discharged after they improved clinically and biochemically.

Observation and Discussion

During the study period total number of pregnant patients admitted in labour room, antenatal ward and other infectious ward for all the causes were 4129. Of these patients admitted, 50 patients were having Infective Hepatitis. These were investigated and their outcomes were studied.

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%

Table 2 and Figure 1 shows distribution of cases according to their registration in our institution. 31 cases (62%) were registered, 7 cases (18%) were referred and 12 cases (20%) were emergency cases.

Table 3 and Figure 2 shows relation of registered/ referred/ emergency status of patients with mortality in Infective Hepatitis in pregnancy. Mortality in referred patients was 22.2% which was higher than 0% in registered and 0% in emergency patients.

Table 4 and Figure 3 shows 60% subjects of Infective Hepatitis reside in city, while 40% resided in rural areas.

In Table 5 and Figure 4 Risk difference is 1.667% which shows that statistically the rural areas are at higher risk of mortality than urban population.

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: Percentage registered, referred and emergency cases with infective hepatitis

	No of cases	Percentage
Registered	31	62 %
Referred	07	18 %
Emergency	12	20%

Table 3: Mortality in registered/referred/emergency subjects with infective hepatitis

	Non Fatal cases	Fatal Cases	Total
Registered	31(100%)	00	31
Referred	07(77.7%)	02(22.3%)	09
Emergency	10(100%)	00	10

Table 4: Relation of urban/rural residence with infective hepatitis

	No. of cases	Percentage
Urban	30	60%
Rural	20	40%

Table 5: Relation of mortality with urban/rural residence in infective hepatitis

	Non Fatal	Fatal	Total
Urban	29(96.67%)	01(3.33%)	30
Rural	19(95%)	01(5%)	20

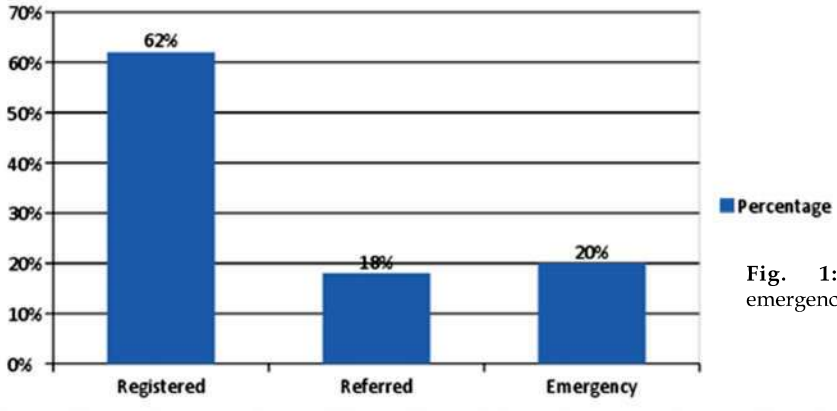

Fig. 1: Registered/referred/ emergency cases

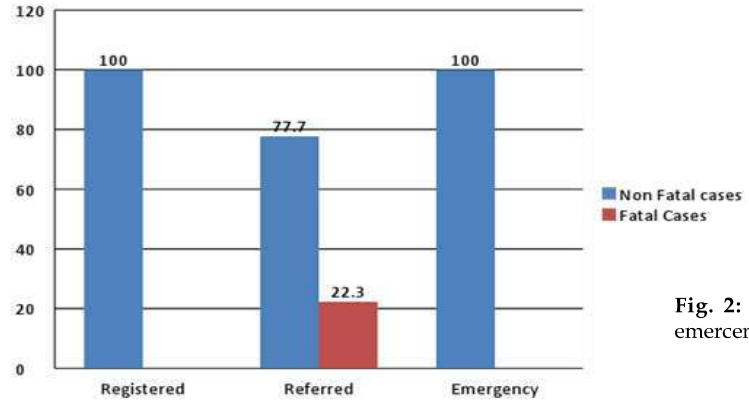

Fig. 2: Mortality in regstered/referred/ emercency cases

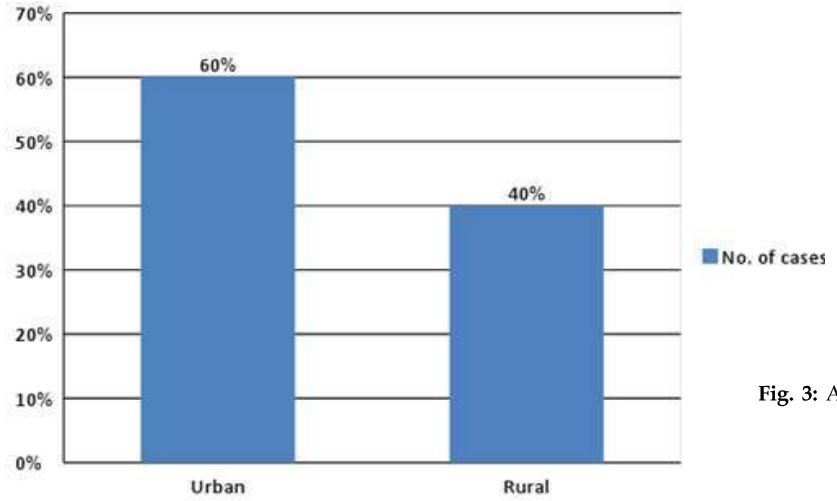

Fig. 3: Area of residence

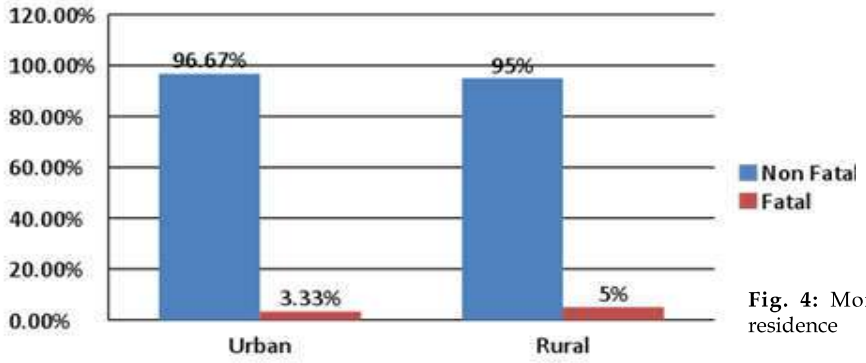

Fig. 4: Mortality and area of residence

Majority of the subjects (64%) were from lower socio-economic group (Table 6).

In table 7,8 mortality is highest in lower socio-economic group. (Figure 5,6 and 7).

Table 6: Socio-economic status with infective hepatitis

Socio-economic class (Modified Prasad classification)[30]	No. of cases	Percentage
I (>6345)	0	00
II (3173-6345)	09	18%
III (1903 – 3172)	08	16%
IV (951- 1902)	32	64%
V (<951)	01	02%

Table 7: Relation of socio-economic status and rural/urban area

Socio-economic class (Modified Prasad classification)[5]	Urban	Rural
I (>6345)	00	00
II (3173-6345)	09(18%)	00
III (1903 – 3172)	07(14%)	01(02%)
IV (951- 1902)	14(28%)	18(36%)
V (<951)	00	01(02%)

Table 8: Role of socio-economic status on mortality of infective hepatitis

Socio-economic class (Modified Prasad classification)	Non Fatal cases	Fatal cases	No. of cases
I (>6345)	00	00	0
II (3173-6345)	09(100%)	00	09
III (1903 – 3172)	08(100%)	00	08
IV (951- 1902)	30(93.75%)	02(6.25%)	32
V (<951)	01(100%)	00	01

Table 9: Relation of various age groups with cases of infective hepatitis

Age	No. of cases	Percentage
15-20	07	14%
21-25	28	56%
26-30	14	28 %
31-35	01	2%
>35	00	00

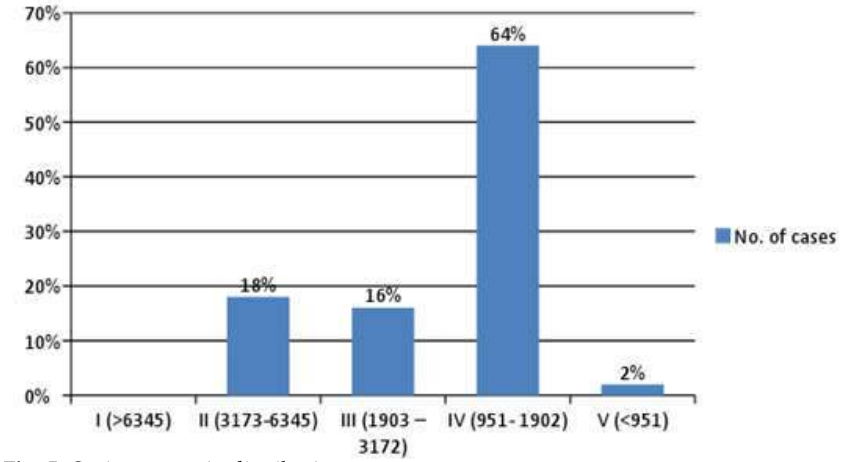

Fig. 5: Socio-economic distribution

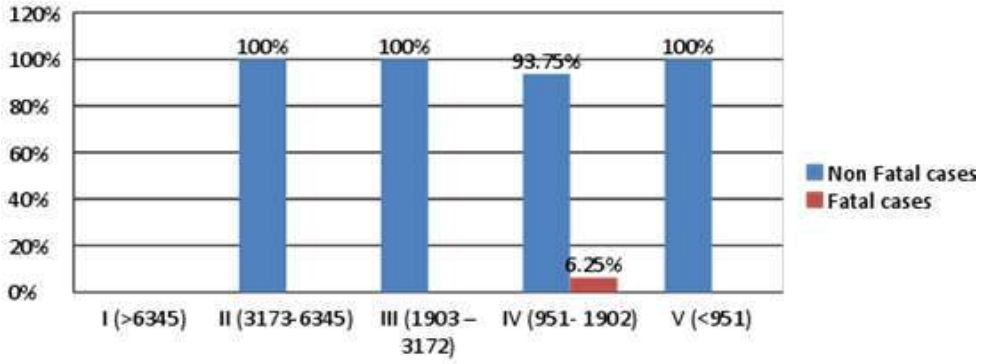

Fig. 6: Mortality and socio-economic status

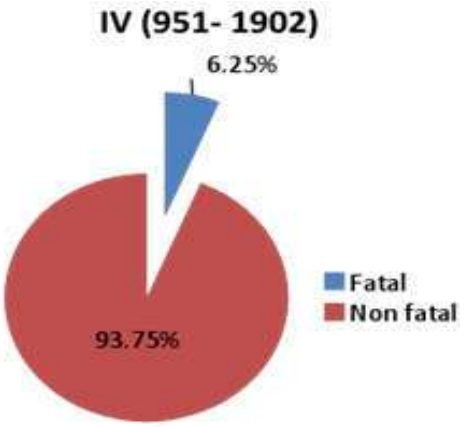

Fig. 7:

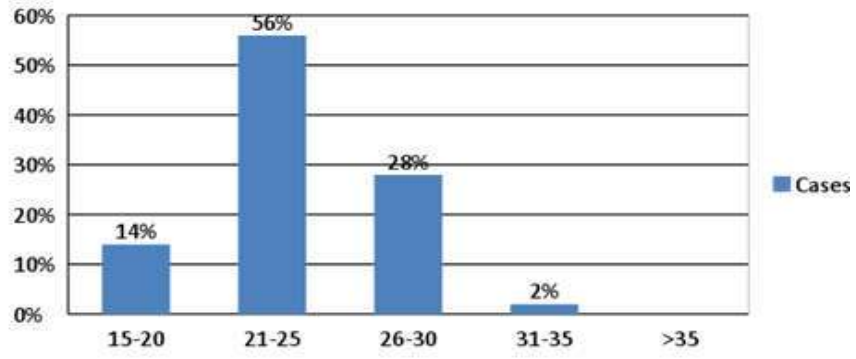

Fig. 8: Distribution in various age groups

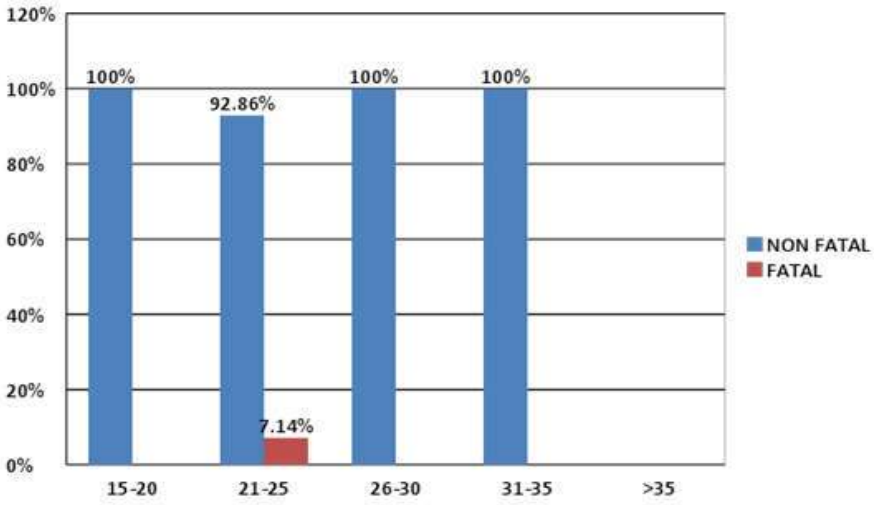

Fig. 9: Mortality in different age group

Table 10: Mortality in different age group

Age (in years)	Non Fatal	Fatal	Total
15-20	07 (100%)	00	07
21-25	26(92.86%)	02(7.14%)	28
26-30	14 (100%)	00	14
31-35	01 (100 %)	00	01
>35	00	00	00

It has been shown in the Table 9 and Figure 8 that 28 subjects (56%) majority belong to 21-25 years age group. Highest incidence is in this age group. There was not a single subject whose age was more than 35 years.

It has been shown in the table 10 that mortality is higher in 21-25 years age group. Thus mortality is higher in younger age group.

Summary

Fifty cases of acute viral hepatitis is pregnant patients have been studied at New Civil Hospital and Government Medical College, Surat in January 2017 to June 2017.

- Total numbers of pregnant subjects admitted during study period are 4129.
- Incidence of viral hepatitis in pregnant women in the present series is 1.21%
- Total maternal mortality is 2 cases in the analysis of 50 cases i.e. mortality 4%.
- Higher incidence is seen in urban areas (60%) than in rural areas (40%).
- Mortality is equal in rural area and in urban areas.
- Incidence is higher in lower socio-economic group (64%).
- Mortality is higher in lower socio-economic group (6.25%).
- Incidence is higher in young age group (56% incidence in 21-25 years of age group).
- Higher mortality in young age group (7.14% mortality in 15-20 years of age group).

Conclusion

The evidence of present study done in January 2017 to June 2017 suggested high incidence of infective hepatitis is in pregnant ladies (1.21%). Majority of patients were from lower socio-economic group (32 out of 50) from urban area (30 cases out of 50) and registered cases (31 out of 50).

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