

A STUDY ON LEPTOSPIROSIS IN ADULT PATIENTS ADMITTED WITH FEVER AND JAUNDICE IN PATNA MEDICAL COLLEGE, PATNA

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Abstract: This study is to evaluate the Leptospirosis in adult patients admitted with fever and jaundice in Patna Medical College and Hospital. In this study incidence and relevant epidemiological data are analyzed. We also analyze the clinical features, investigation reports, complications and outcome of diagnosed cases. **Methods :** sample size is 70. It is a prospective study done on the patients admitted in medicine dept of Patna Medical College with fever and jaundice between 1st December 2018 to 31st December 2020. Microscopic agglutination test is used to identify serology (IgM leptospira) **Results :** The results are analyzed and we found that incidence of leptospirosis is 32.9%. Most of the patients are male 61.4% and most of the patients are manual workers 52.2%. Highest seropositivity is noted between in age group 41 – 60 years (43.5%). Most common complication noted is bleeding disorder (8.7) and renal failure (8.7). Mean duration of hospital stay is 7.69 days. Mortality rate is 21.7%. **Conclusion:** The incidence of leptospirosis is more common among male and manual workers. Complications develop in 43.4% cases. Most of the patients are cured with treatment.

INTRODUCTION

Leptospirosis is essentially an animal infection by several serotypes of *Leptospira* (Spirochaetes) and transmitted to man under certain environmental conditions. The disease manifestations are ranging from a mild febrile illness to severe, and sometimes fatal disease with liver and kidney involvement. Weils disease is one of the many manifestations of human leptospirosis.

Leptospirosis is considered to be the most widespread of the

disease transmissible from animal to man. It has high prevalence in warm and humid tropical countries. Out breaks mostly occur as a result of heavy rainfall and consequent floodings. Although the global burden of the disease is unknown, >500000 cases of leptospirosis are estimated to occur worldwide each year. The incidence in some areas may be as high as 975 cases per lac population. During the past decades, the occurrence of outbreak highlighted the strong links between leptospirosis and extreme weather events in Guyana, India, Philippines and Thailand etc.

This study of incidence and clinical profile of leptospirosis Among patients presenting with fever and jaundice was conducted, so far a non-endemic region for Leptospirosis. Though cases of Leptospirosis occur sporadically in this hospital a study about the clinical profile is essential in epidemiological aspect.

AIMS OF THE STUDY

- 1) To study the incidence and relevant epidemiological data among the patients of unexplained fever and jaundice cases admitted in PMCH.
- 2) To analyze occupation of seropositive cases
- 3) To analyze clinical features, investigation reports, complications and outcome of dignosed leptospira cases

MATERIAL AND METHODOLOGY

1) SOURCE OF DATA

Patients admitted in General Medicine department Patna Medical College and Hospital, Patna

2) SAMPLE SIZE: 70

3) SELECTION OF CASES

INCLUSION CRITERIA

- Patients with acute onset of fever and jaundice .
- All patients should be >12 years of age.

EXCLUSION CRITERIA

All known cases of chronic liver disesses were excluded from the study

4) STUDY DESIGN :

A prospective study will be done on 70 patients presenting with fever and jaundice in medicine dept of patna medical college and hospital.

RESULTS

Table 1: Age Distribution

Age Group (years)	Frequency	Percentage
12-20 years	10	14.3
21-40 years	25	35.7
41-60 years	28	40.0
>60 years	7	10.0
Total	70	100.0
Mean Age	40.68±15.53	

Table 2: Sex Distribution

Sex	Frequency	Percentage
Male	43	61.4
Female	27	38.6
Total	70	100.0
Male : Female Ratio	1.59:1	

Table 3: Occupational Status of the Patients with Leptospirosis (n=23)

Occupation	Frequency	Percentage
Manual Workers	12	52.2
Non-manual Workers	3	13.0
Housewives	5	21.7
Students	1	4.3
Businessman	2	8.7
Total	23	100.0

Table 4: Signs & Symptoms

Signs & Symptoms	Frequency	Percentage
Fever	70	100.0
Jaundice	70	100.0
Myalgia	66	94.3
Anorexia	57	81.4
Headache	43	61.4
Conjunctival Suffusion	41	58.6
Cough	25	35.7
Altered Sensorium	21	30.0
Nausea/Vomiting	20	28.6
Diarrhoea	18	25.7
Dehydration	17	24.3
Abdominal Pain	15	21.4
Anaemia	14	20.0
Muscle Tenderness	11	15.7
Hepatomegaly	10	14.3
Oliguria	10	14.3
Hemoptysis	8	11.4
Abdominal Tenderness	7	10.0
Hematuria	5	7.1
Rash	4	5.7
Splenomegaly	2	2.8
Hematemesis	2	2.8
Lymphadenopathy	2	2.8

Table 5: Prevalence of Leptospirosis

Prevalence of Leptospirosis	Frequency	Percentage
Positive	23	32.9
Negative	47	67.1
Total	70	100.0

Table 6: Complete Hemogram

Parameters	Mean	±SD
Hemoglobin gm%	8.73	±1.30
WBC Count cells/ μ L	8221.73	±1127.11
Platelet Count lakhs/ μ L	1.55	±0.39
ESR mm	60.91	±18.87

Table 7: Liver Functions Tests Parameters

Parameters	Mean	±SD
Total Bilirubin (mg/dl)	6.88	±2.89
Direct Bilirubin (mg/dl)	7.36	±3.57
SGOT (U/L)	76.43	±56.3
SGPT (U/L)	80.21	±56.53
ALP (IU/L)	109.17	±66.28
Total Protein(g/dl)	5.20	±1.37

Table 8: Renal Function Tests Parameters

Parameters	Mean	±SD
Urea (mg/dl)	71.69	±22.91
Creatinine (mg/dl)	3.16	±1.79

Table 9: Complications

Complications	Frequency	Percentage
Renal Failure	2	8.7
Lung Consolidation	1	4.3
Bleeding Disorders	2	8.7
Encephalopathy	5	21.7

Table 10: Mortality Rate

Mortality	Frequency	Percentage
Cured	18	78.3
Expired	5	21.7
Total	23	100.0

CONCLUSION

The incidence of Leptospirosis among the patients presenting with fever and jaundice is 32.9%. Most of the patients are male (60.9%) and are manual worker(52.2%). Other than fever and jaundice most common symptoms are myalgia(94.3%) anorexia (81.4%), headache(61.4%) conjunctival suffusion(58.6%).Most of the cases have conjugated hyperbilirubinemia. Most common complication noted is encephalopathy(21.7%), renal failure (8.7%) and bleeding disorder (8.7%).Average duration of hospital stay is < 5 days.Most of the patients are cured with mortality rate is 21.7%.

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