

LEPTOSPIROSIS

SHIBY THOMAS

It is a term applied to disease caused by all *Leptospiras* regardless of specific serotypes. This is a most wide-spread Zoonosis.

A case Study

Mr. Sajan Joseph 23 years admitted in Holy Family Hospital on 6-10-1999 was diagnosed to have Leptospirosis, and it was confirmed by various investigations.

With antibiotics, platelet transfusion, supportive and symptomatic measures, his general condition improved and was discharged on 18-10-1999.

Assessment of Patient

History

A twenty one year old male, with no relevant past history, suffered with fever for 4 days myalgia, high coloured urine and bloodstained nasal discharge for one day and vomiting.

On Examination

Examination of abdomen showed hepatomegaly. No other mass. Presence of conjunctival congestion, andollar.

Etiology

Widespread zoonosis. Prevalent in tropics. *Leptospira* contains only one species, *L. Interrogans*. *L. Interrogans* are of two types-the pathogenic *Interrogans* and nonpathogenic *biflexia*.

Epidemiology

In the carrier state the host may spread *Leptospiras* in urine for months or years, may develop in many animals.

Survival of pathogenic *Leptospiras* governed by

- PH of urine of the host.
 - PH of soil or water into which they shed.
 - ambient temperature -22 C, survive for several weeks.
- Incubation period: 7-13 days
Age : 10-39 years.
80% males : in hot weather.

Pathophysiology

Liver is most commonly affected. Oedema and inflammatory exudate

Diagnostic Evaluation

The organism can be demonstrated by dark ground microscopy of urine in the early phase of illness.

A more practical method to demonstrate rising titers of antibody in the second and third weeks of illness.

In infection by *Leptospira* icterohemorrhagia urine shows heavy proteinuria, with myoglobin and hemoglobin casts.

INVESTIGATIONS

Sl. No.	Investigations	Normal Value	Patient's Value
1.	ESR mm/hr	20 mm/hr	116 mm/hr
2.	hb gm/100 cc	14-18 gm/100 cc	10 gm/100 cc
3.	blood urea	15-40 mg%	61 mg%
4.	serum creatinine	0.6-1.4 mg%	3.4 mg%
5.	s. bile	0.31 mg%	10.2mg%
6.	SGOT	5-40 u	366 u
7.	SGPT	5-40 u	95 u
8.	S. Na	135-145 mg/L	134 mg/L
9.	Platelet	100,000-400,000	80,000

separate the liver cells thus causing intralobular biliary stasis. Centrilobular degeneration and necrosis may occur in severe cases. Heart and kidneys may also be involved in a similar fashion.

Signs and Symptoms

1. Fever
2. Chills
3. Headache
4. Muscle cramps
5. Causalgia

These symptoms occur between 4-9 days.

Most characteristics, physical signs.

1. Conjunctival congestion
2. Photophobia
3. Skin rashes
4. Jaundice
5. Hemorrhage
6. Anemia, high coloured urine

Significance

- Decreased platelet count cause bleeding
- Increased ESR shows infection and inflammation
- Increased blood urea cause renal failure
- Increased CPK due to myocarditis.

MANAGEMENT

Medical Management

Penicillin is the drug of choice. Doxycycline is administered in penicillin resistant patients. Penicillin, tetracyclines or streptomycin in heavy doses to be started within 48 hours. Penicillin in doses of 1 mega-unit 4 hourly for 24 hours and 6 hourly for 6-7 days may be given. If azotemia and jaundice present fluid and electrolytes

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