LEPTOSPIROSIS

- Zoonotic d/s
- Worldwide –tropical and subtropical
- Causative organism– Leptospira (Spirochete)
- Reservoir – rat(principal source)
  dog,cat,livestock,wild animals
- Source of infection :
  water or soil contaminated with urine or faeces of infected animals

Risk groups

- Agricultural workers
- Veterinarians
- Meat handlers
- Rodent control workers
- Laboratory workers

pathogenicity

- Leptospira enter the body through cut or abrasion in skin or through mucous membrane
- Spread to all organs hematogenously
- Damage endothelial lining of small blood vessel
- Leakage and extravasation of blood cells , hemorrhage and
- Ischemic damage to liver,kidneys,meninges and muscles

Clinical feature

- Asymptomatic or
- Symptomatic → febrile illness (70%)
  → aseptic meningitis(20%)
  → wiel d/s(5-10%)
- Incubation period:1-2wks
- Biphasic
  - -initial/septicemic phase
  - -immune/leptospiruric phase

Initial/septicemic phase

- Lasts for 2-7 days
- Onset is abrupt with high grade fever with rigor n chills,lethargy,headache,nausea n vomiting
- There may be conjunctival suffusion with photophobia and orbital pain
- Generalised lymphadenopathy and hepatosplenomegaly
- Transient maculopapular rash in<10%
- Most patients are asymptomatic within 1 wk

Immune/leptospiruric phase

- Leptospira localise to tissues
- No more be isolated from blood or CSF
- Circulating autoantibodies to leptospira are present
- Some children-aseptic meningitis or uveitis with recurrence of fever
- CNS abnormalities usually normalize within 1wk
- Mortality is rare

Icteric leptospirosis(weil syndrome)

- Most severe of all manifestations
- Severe hepatic n renal dysfunction
- Jaundice n hepatomegaly are usually detected
- Splenomegaly in 10% of the cases
- Renal failure-2nd wk
- All have abnormal urinary findings
  -hematuria,proteinuria,cast
- Azotemia is common a/w oliguria or anuria
- Mortality is 5-10%

Differential diagnosis

- Malaria
- Dengue
- Enteric fever
- a/c viral hepatitis
- Hantavirus infection

Diagnosis

- CBC-anemia,leukocytosis,thombocytopenia
- CRP ⇧
- Liver enzymes mildly ⇧ with SGOT>SGPT
- CPK is high
- In weil d/s-

  serum creatinine is elevated

  coagulation parameters deranged

  direct hyperbilirubinemia

  raised transaminase

Specific diagnosis

- Serologic testing
  - gold standard–MAT
  - commercial kits–rapid test
    - IgM ELISA
- Microscopic examination of organism or culture

Treatment

- DOC in severe cases-parenterel Penicillin G
- Acceptable alternatives-Ceftriaxone and Tetracycline
- DOC for oral treatment

  Amoxicillin and Doxycycline(>8yrs)

prevention

- Avoid exposure to contaminated water
- Single dose of doxycyline or amoxicilline following exposure can prevent illness

THANK YOU