Original Research Paper

Volume - 13 | Issue - 02 | February - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Tropical Medicine

A QUAINT PRESENTATION OF NEUROLEPTOSPIROSIS: A DIAGNOSTIC CHALLENGE

Dr. CH V Bala Rama Krishna* Post Graduate NRI Institute Of Medical Sciences, Visakhapatnam. *Corresponding Author

Dr. A Swetha Assistant Professor NRI Institute Of Medical Sciences, Visakhapatnam.

ABSTRACT Leptospirosis, a zoonotic disease caused by Leptospira genus with clinical presentations ranging from nonspecific fevers to fulminant diseases such as Weil's syndrome. Neurological manifestation of leptospirosis (Neuroleptospirosis) as initial presentation without the classical hepatorenal dysfunction is a rare entity and accounting for 10-15% of cases. Herein reporting a case of a 20-year-old female from rural area with exposure to rodents and cattle presenting with high-grade fever headache, vomiting, photophobia & during hospital stay patient developed cerebellar symptoms. On work, up she was diagnosed as Neuroleptospirosis. The patient was successfully managed and discharged in stable condition.

KEYWORDS : Leptospira, Neuroleptospirosis

INTRODUCTION:

Leptospirosis is a common zoonotic disease of tropical and temperate countries.Clinical spectrum range from asymptomatic,subclinical infection to a fatal hepatorenal syndrome,pulmonary hemorrhage and acute respiratory distress syndrome.Neurological manifestations of leptospira is uncommon and often underdiagnosed and emperically treated as cerebral malaria,dengue fever,viral encephalitis,tubercular meningitis,hepatic encephalopathy leading to increased mortality and morbidity.Hence we are presenting a case with uncommon manifestations which highlights the importance of considering leptospirosis as a diagnostic possibility in endemic areas.

CASE REPORT:

A 20-year-old female hailing from rural area, with rodent,cattle exposure came to emergency with complaints of fever,high grade,continuous with chills and rigors since 4 days, headache which is diffuse and continuous associated with projectile vomitings since 2 days, blurring of vision and photophobia since 1 day.There was no focal neurological deficits,involuntary movements of limbs at the time of admission.There is no history of jaundice,rash,bleeding manifestations,decreased urinary output.On day 3 of hospitalization,patient developed swaying.

On examination, Vitals are stable. Pallor+,no icterus,cyanosis,clubbing,lymphadenopathy,pedal edema.Neurological examination revealed Neck rigidity and involvement of cerebellum as dysarthia (scanning type),titubation, truncal ataxia, dysdiadokinesia on both sides,upper limb incordination,hypotonia present,lower limbs were normal.Other system examination was normal.Patient was evaluated and following are the investigations done.

INVESTIGATIONS:

Hemogram: Hemoglobin-9.7grams, WBC-4208, Platelets-86,000.
Tropical workup done which releaved Leptospira IgM -positive
LFT: S.T. Bilirubin-1.4, SGPT 141, SGOT197, ALP 352.
RFT: Normal, CUE: Normal, Coagulation profile-normal.
Blood cultures and urine cultures were sterile.
Triple screening was negative.

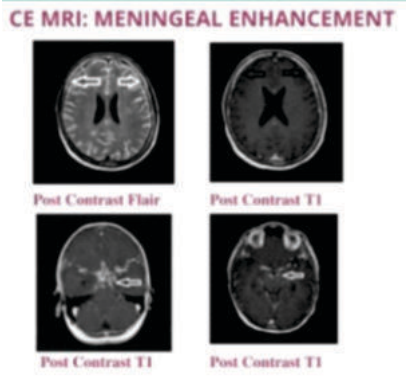
USG abdomen: Normal
Chest X-ray: Normal
CE MRI: Diffuse meningeal enhancement with cerebellar edema
CSF ANALYSIS: lymphocyte predominance.
CSF-HSV PCR: Negative.
CSF Leptospira IgM: Positive.
Repeat CE-MRI BRAIN (Day 10): Resolution of pachymeningitis compared to previous scan.

DISCUSSION:

This patient presented with acute meningoencephalitis and on workup revealved thrombocytopenia with transaminitis with leptospira IgM positive in blood and direct invasion of leptospira into the CNS makes the diagnosis as Neuroleptospirosis as per Modified Faine's criteria.

Patient was started on doxycycline 100mg twice daily, steroids and other supportive management. After 20 days of stay in hospital she recovered completely and discharged in stable condition. During followup her Biochemical and hematological parameters were normal.

Neurological manifestations of leptospirosis itself is uncommon and neurological manifestations as initial presentation of leptospira is very rare and brings a diagnostic challenge to the physician.This case report emphasizes the importance of considering neuroleptospirosis as an important differential diagnosis of dengue, Japanese encephalitis and cerebral malaria, especially in endemic areas with seasonal prevalence as early diagnosis and effective treatment of Neuroleptospirosis decreases the mortality and neurological sequalae.



REFERENCES

1) Wang, N., Han, Y. H., Sung, J. Y., Lee, W. S., & Ou, T. Y. (2016). Atypical leptospirosis: an overlooked cause of aseptic meningitis. BMC research notes, 9, 154. https://doi.org/10.1186/s13104-016-1964-
2) Bhatt, M., Rastogi, N., Soneja, M., & Biswas, A. (2018). Uncommon manifestation of leptospirosis: a diagnostic challenge. BMJ case reports, 2018, bcr2018225281. https://doi.org/10.1136/bcr-2018-22528
3) Kamath SA, Joshi SR (2003) Re-emerging of infections in urban India - focus Leptospirosis. J Assoc Physicians India 51: 247
4) Schiefecker AJ, Beer R, Pfausler B, Lackner P, Broessner G, et al. (2015) Neuroleptospirosis: Aseptic Meningoencephalitis or Invasion into the Central Nervous System?. J Neuroinfect Dis S2:001. doi:10.4172/2314-7326.S2-001
5) Mathew T, Satishchandra P, Mahadevan A, et al. Neuroleptospirosis revisited: experience from a tertiary care neurological centre from south India. Indian J Med Res. 2006;124:155–62.