

## **Abstract**

### **Background**

Leptospirosis presenting as a primary isolated neurological disease without clinical manifestations of leptospirosis (primary neuroleptospirosis) is uncommon. Meningoencephalitis due to leptospirosis is considered to be immunologically mediated, although direct invasion of the CNS has rarely been reported. *Leptospira interrogans* serovar Bakeri has not been previously reported to cause primary neuroleptospirosis. We report a patient with primary neuroleptospirosis presenting with meningitis caused by *Leptospira interrogans* serovar Bakeri.

### **Case presentation**

62- year-old Sri Lankan woman, presented with acute fever, with associated meningism features without liver, renal, pulmonary, cardiac or haematological manifestations suggestive of leptospirosis. However, because of exposure to muddy water in a paddy field 10 days prior to illness she was tested for *Leptospira* serology which showed a Microscopic Agglutination Test (MAT) titre of >1:320 for *Leptospira interrogans* serovar Bakeri and a positive polymerase chain reaction (PCR). Her haematological and biochemical investigations were normal. Primary neuroleptospirosis was diagnosed and she was treated with intravenous ceftriaxone for 14 days following which she recovered completely.

### **Conclusions**

*Leptospira interrogans* serovar Bakeri is a cause of primary neuroleptospirosis