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Letter to Editor

Guillain – Barre syndrome with no known etiology: Rule out scrub typhus

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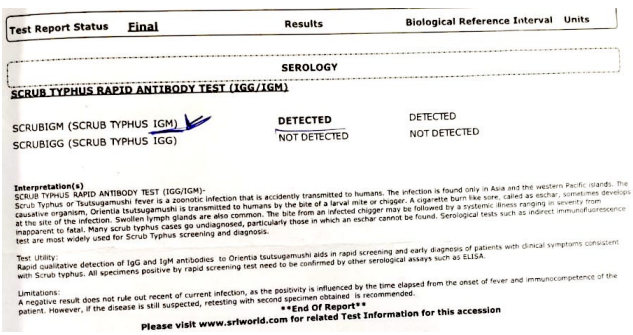
Sir,

We report a case of Guillain – Barre Syndrome (GBS) in a 48-year-old, male farmer with no known comorbidities. He presented with a history of fever for ten days, diarrhoea for eight days, weakness in all four limbs for four days and heaviness in the chest for two days. He got admitted to the ICU for inability to walk without aid and poor cough reflex. The patient was conscious and oriented. He did not have any eschar nodule, rash, lymphadenopathy, or hepatosplenomegaly on physical examination. Neurological examination revealed right facial paralysis, with 2/5 motor power on the bilateral lower limbs with normal sensations in all four limbs. The deep tendon reflexes were absent in lower limbs with negative Babinski's sign and Hoffman's sign. Kernig sign and Brudzinski sign were absent. Baseline investigations, blood cultures and acute febrile illness workup were normal. On nerve conduction study slowed conduction velocity and prolonged distal latencies were noted. Electrophysiologic studies showed demyelinating patterns of motor neuropathies. Cerebrospinal fluid (CSF) examination revealed mild pleocytosis (10 cells/mm3) and increased protein (227 mg/dl). Since blood investigations and culture reports were normal. We sent work up for scrub typhus as it was endemic in the area and patient was a farmer though no eschar was detected. Scrub typhus rapid antibody test detected scrub typhus IgM antibody (Figure 1). He was intubated because of the poor cough reflex and decreased respiratory efforts and was started on antibiotics (Doxycycline and ceftriaxone) for scrub typhus and intravenous immunoglobulin (400mg/kg/day) for five consecutive days for GBS. The patient was tracheostomized because of the need for prolonged mechanical ventilation. Gradually, his muscle power improved for which he was put on T-piece and weaned off the ventilator on day 21 of ICU.



Test Report Status	Final	Results	Biological Reference Interval	Units
SEROLOGY				
SCRUB TYPHUS RAPID ANTIBODY TEST (IGG/IGM)				
SCRUBIGM (SCRUB TYPHUS IGM)		DETECTED	DETECTED	
SCRUBIGG (SCRUB TYPHUS IGG)		NOT DETECTED	NOT DETECTED	

Interpretation(s)
SCRUB TYPHUS RAPID ANTIBODY TEST (IGG/IGM)-
Scrub Typhus or Tsutsugamushi fever is a zoonotic infection that is accidently transmitted to humans. The infection is found only in Asia and the western Pacific islands. The causative organism, Orientia tsutsugamushi is transmitted to humans by the bite of a larval mite or chigger. A cigarette burn like sore, called as eschar, sometimes develops at the site of the infection. Swollen lymph glands are also common. The bite from an infected chigger may be followed by a systemic illness ranging in severity from inapparent to fatal. Many scrub typhus cases go undiagnosed, particularly those in which an eschar cannot be found. Serological tests such as indirect immunofluorescence test are most widely used for Scrub Typhus screening and diagnosis.

Test Utility:
Rapid qualitative detection of IgG and IgM antibodies to Orientia tsutsugamushi aids in rapid screening and early diagnosis of patients with clinical symptoms consistent with Scrub typhus. All specimens positive by rapid screening test need to be confirmed by other serological assays such as ELISA.

Limitations:
A negative result does not rule out recent of current infection, as the positivity is influenced by the time elapsed from the onset of fever and immunocompetence of the patient. However, if the disease is still suspected, retesting with second specimen obtained is recommended.

End Of Report

Please visit www.srlworld.com for related Test Information for this accession

Fig. 1: Scrub typhus rapid antibody test report

Scrub Typhus caused by a bacteria called Orientia tsutsugamushi (O. tsutsugamushi).[1] It is a systemic illness that causes generalized vasculitis in the affected individuals. Disease is acquired by bite of infected chiggers (larval mites),[2] especially in rural areas. O. tsutsugamushi infection is characterized by fever, head ache, body ache, lymphadenopathy, rash and eschar, though all these features may not be present in all cases.[2] Severe cases if left

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untreated may develop multiorgan involvement including meningitis, pneumonitis, and immune thrombocytopenia.[3] Patients with neuropathy may have multiple nerves affected at random areas. This asymmetrical, sensory and motor involvement of at least 2 separate nerve areas is called as mononeuritis multiplex.[1] Early detection of disease and initiation of antibiotic therapy (doxycycline) can be lifesaving and leads to faster recovery.

Guillain-Barre syndrome (GBS) is an immune mediated disease characterised by ascending motor weakness, areflexia, with minimal sensory involvement. CSF examination reveals increased protein in CSF without pleocytosis (albuminocytological dissociation). It has been reported following several viral and bacterial infections most notably Campylobacter jejuni gastroenteritis, Epstein-Barr virus (EBV) or cytomegalovirus (CMV) and even some vaccinations.Our patient presenting withGuillain-Barre syndrome (GBS) following scrub typhus is still a rare presentation and is rarely reported worldwide though first case was reported in 2007.[4] Lack of a timely diagnosis would result in patient receiving unnecessary beta lactam antibiotics which would have been ineffective in this case. So, it is important to have a high index of suspicion especially for patients living in endemic areas or where with occupational (or recreational) exposure might pose a risk of chigger bite as early detection and prompt treatment can be lifesaving.[5]

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