Introduction:
Scrub typhus is caused by Orientia tsutsugamushi[1,2,3,4,5]. Its prevalent by bite of larval stage of tromboculid mites or chigger[1]. Clinical features may include fever, headache, myalgia, lymphadenopathy, eschar, skin rash. It may also cause pneumonia, renal failure, shock, meningoencephalitis, multiple organ failure[1,2]. Our study aims to discuss the incidence of organ dysfunction in a comprehensive way taking the overall population of patients with identified scrub typhus infection. There is lack of data in eastern India regarding the incidence and risk factors of developing multiorgan dysfunction syndrome (MODS) in scrub typhus.

Methods:
In this retrospective study we studied the incidence of various organ involvement and the risk factors associated with the development of MODS in scrub typhus. We collected data from December 2016 to November 2019 in tertiary care hospital at Kolkata. We have included all patients who are having fever, scrub typhus IgM antibody positive, age more than 14 years. SOFA score was used in evaluating patients with MODS. Exclusion criteria involves patient who are having coinfectional ong with scrub typhus.

Results:
In a cohort (n=114), patients with multiorgan dysfunction syndrome was seen in 27 patients (23.68%), the mean age in group of patients with MODS was 50.0 +/- 14.96 years (mean +/- SD). In group of patients with MODS, fever duration in days was of 11 +/- 3.58 days (mean +/- SD), interval from treatment to defervescence in days was 5.11 +/- 2.39 days (mean +/- SD). Among patients with MODS, hematologic involvement was seen in 7 patients (25.92%), hepatic involvement was seen in 19 patients (70.37%), renal involvement was seen in 17 patients (62.96%), neurologic involvement was seen in 24 patients (88%), respiratory involvement was seen in 14 patients (51.85%), cardiovascular was seen in 8 patients (29.63%), ICU shifting was necessary in 20 patients (74.07%), mechanical intubation was needed in 14 patients (51.85%) in multiorgan dysfunction syndrome patients. Hospital mortality in patients with MODS was 3 patients (11.11%). No mortality was seen in patients without MODS. Other parameters were evaluated among patients with MODS. They include eschar in 1 patient (3.7%), seizure in 7 patients (25.93%), hepatosplenomegaly in 26 patients (96.3%), leucopenia in 3 patients (11.11%), leucocytosis in 13 patients (48.14%), thrombocytopenia in 7 patients (25.92%), decreased haemoglobin in 22 patients (81.48%), transaminitis in 19 patients (70.37%). The risk factors associated with the development of MODS are platelet counts, bilirubin, transaminitis, Glasgow coma scale, time interval from treatment to defervescence, haemoglobin, total leucocyte count and fever duration.

Conclusion:
Scrub typhus is an important cause of acute febrile illness in this part of the country and is frequently associated with organ dysfunction. However, the overall mortality is low which is similar to other studies done before[2].

References:

