

## Case Report

# Scrub Typhus – An Overlooked Aetiology for Acute Febrile Illness in Bangladesh: A Case Report

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### Abstract

*Rickettsial fevers are a heterogeneous group of illness characterized by fever, headache, myalgia and rash. Rickettsia has a wide global distribution and regional species specificity. In spite of significant serosurveillance reports, rickettsial fevers are occasionally reported in Bangladesh. Here, we report a case of scrub typhus occurring in a young girl who presented with fever and had a typical eschar. We emphasize rickettsial fever should be a differential diagnosis in acute fever without localizing symptoms and signs in Bangladesh.*

**Key words:** Bangladesh, eschar, *Orientia tsutsugamushi*, rickettsial fever.

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### Introduction

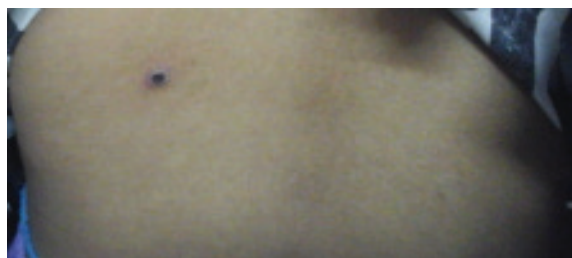
In tropics and sub-tropical countries, common causes of acute fever without localizing symptoms and signs include viral fevers, enteric fevers, rickettsial fevers, leptospirosis, early stages of malaria and kala azar etc. Though rickettsial fevers are recognized causes for such fevers, they are often under-reported.<sup>1</sup> Here, we report a case of scrub typhus occurring in a young Bangladeshi girl.

### Case Report

A 17-year-old girl from Savar, Dhaka presented with a 9-day history of high grade continued fever, headache and myalgia. She did not have any cough, burning micturition, joint pain or rash. She took paracetamol and cefixime according to local physician's prescription without any benefit.

Patient was febrile with a temperature of 103° F, tachycardic (pulse 102/min) and had normal blood pressure (110/74 mm Hg). Systemic examination was unremarkable. On query, she told that there was a scab

in her left lower back, which she noticed 3 days ago (Figure 1), but there was no lymphadenopathy.



**Figure 1** Photograph of back of the patient showing eschar

She had neutrophil leukocytosis (total white cells 16,700/cmm, neutrophils 76%), high erythrocyte sedimentation rate (41 mm in 1st hour) and mild elevation of hepatic transaminases (alanine aminotransferase 54 U/L and aspartate aminotransferase 59 U/L). Reports for febrile antigen was positive for rickettsia (OX2 1:160, OXK 1:640 and OX19 1:160, ref >1:80).

She was prescribed azithromycin 500 mg once daily for 5 days. She became afebrile on second day of azithromycin intake.

### Discussion

In spite of significant serosurveillance reports<sup>2-4</sup> and clinical recognition of cases, rickettsial fevers are only occasionally reported in literature in or from

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Bangladesh.<sup>5,6</sup> The largest series published in 2007 revealed that clinical presentation is indistinguishable from other common causes of fever like viral and enteric fevers.<sup>5</sup> Presence of typical eschar in scrub typhus is also an uncommon feature.<sup>4</sup>

Routine laboratory features are inefficient to differentiate between common causes of acute fever; serology may identify the cause. Triple antigens should be done after the first week. So, a high index of clinical suspicion is important.

Scrub and murine typhus infections are under-recognized causes of febrile illness across the tropics; in Bangladesh one-fifth to one-third of cases of acute undifferentiated fevers had seropositivity for rickettsial antigens.<sup>2-4</sup> There was no specific geographical distributions within the country but seasonal variations in species specificity were reported and controversies do exist.<sup>2-4</sup>

Scrub typhus rapidly responds to doxycycline; azythromycine is also effective. Cases may be complicated by involvement of central nervous system, heart, kidney and liver. Death is not impossible.<sup>1</sup> We urge physicians should have a high index of suspicion and rickettsial fever should be a differential diagnosis

in acute fever in Bangladesh; specially, if there is a positive report for tracking, tick bite and eschar.

**Conflict of interest:** Nothing to declare.

## References

1. Seong SY, Choi MS, Kim IS. *Orientia tsutsugamushi* infection: overview and immune responses. *Microbes Infect* 2001;3:11-21.
2. Maude RR, Maude RJ, Ghose A, Amin MR, Islam MB, Ali M. Short Report: Serosurveillance of *Orientia tsutsugamushi* and *Rickettsia typhi* in Bangladesh. *Am J Trop Med Hyg* 2014;91:580-83.
3. Faruque LI, Zaman RU, Gurley ES, Massung RF, Alamgir ASM, Galloway RL, et al. Prevalence and clinical presentation of *Rickettsia*, *Coxiella*, *Leptospira*, *Bartonella* and chikungunya virus infections among hospital-based febrile patients from December 2008 to November 2009 in Bangladesh. *BMC Infectious Diseases* 2017;17:141.
4. Kingston HW, Hossain M, Leopold S, Anantatat T, Tanganuchitcharnchai A, Sinha I, et al. Rickettsial Illnesses as Important Causes of Febrile Illness in Chittagong, Bangladesh. *Emerging Infectious Diseases* 2018;24:638-45.
5. Miah MT, Rahman S, Sarker CN, Khan GK, Barman TK. Study on 40 cases of rickettsia. *Mymensingh Med J* 2007;16:85-88.
6. Rabbani SB, Hossain MI, Begum A. Case Report of Scrub Typhus. *J Bangladesh Coll Phys Surg* 2018;36:123-27.