Scrub Typhus and Monkeypox: Diagnostic Dilemmas and Dual Burden during the Indian Monsoons

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Dear Editor,

On 14th July 2022, the Indian healthcare system was put forth with a new challenge, a realization that Indians too are susceptible to Monkeypox with the first imported case reported in Kerala closely followed by a subsequent rise in cases reported in Delhi.[1]

It is essential to realize that despite government efforts to contain the infection, increased accessibility to crowded urban spaces and expansive population poses a threat for the spread of Monkeypox. This can be owed to the possibility of droplet transmission and skin to skin contact with infected individuals. Moreover, incessant rains especially the Indian Monsoons of July - September pose a new dilemma in terms of medical diagnosis. Hills, forests and the tropical south of India serve as endemic spots for the spread of Orientia tsutsugamushi, a mite-borne bacterium that causes Scrub typhus. Although Scrub typhus was initially confined to the rural areas and the southern tropics, urban regions such as Kolkata are no more immune to the infection with India reporting a total of 18,781 cases in the last one decade alone. Monsoons often report high numbers of the infection which when coupled with the slow rise in the number of Monkeypox cases along the same duration, a medical dilemma over their diagnosis is possible which has to be addressed.[2,3]

Centers for Disease Control and Prevention (CDC) recommends diagnosis of Scrub typhus based on its Clinical Spectrum and Epidemiological prevalence, particularly in the early stages of the disease, owing to inadequacy of investigative modalities such as Serology on all stages of clinical presentation. Confirmatory tools such as ELISA and real-time PCR are time consuming and non-economical as a screening tool.[4,5]

Clinical spectrum of these zoonotic infections are grossly similar with Monkeypox presenting as fever, headache, lymphadenopathy, myalgia and fatigue, with prominent papular or vesicular rashes and mucosal lesions.[3] Scrub typhus on the other hand, presents with high grade fevers and potentially dark skin lesions or eschar on the trunk, face or extremities. 1/3rd of the patients with Scrub typhus may rapidly progress to multi-organ involvement with rare cases progressing to altered sensorium indicative of acute encephalitis syndrome, demanding immediate medical intervention.[2] While presence of an eschar or vesicular rash could be a differentiating factor, monkeypox infected patients without evident rashes or lesions have been detected. Such patients are often tested using anogenital or urethral samples subjecting them to PCR for diagnosis on clinical suspicion.[4]

Management strategies for Scrub typhus predominantly involve doxycycline or alternative antibiotics with Monkeypox often reliable on supportive care owing to its viral nature. Nevertheless, monkeypox is contagious and requires isolation of the infected individual, often posing a threat to immunocompromised as well as to individuals admitted with other illnesses.[4]

It is thereby essential to diagnose monkeypox as early as possible, possibly in the first visit to a healthcare practitioner to avoid risk to the larger population.

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Tests for monkeypox for symptomatic patients presenting with fever, rashes and lymphadenopathy have not yet been made mandatory by the Indian healthcare system. We thereby emphasize a mandatory need to maintain a degree of suspicion among patients who present with Scrub typhus and other illnesses with a potential to mask Monkeypox. Patient awareness and Counseling should also be made mandatory for all individuals with a higher suspicion for early presentation of monkeypox, so as to subject a larger population for screening and management.

Moreover, lack of clinical clarity and paucity of data as well as absence of appropriate surveillance systems contribute to the ambiguity that still remains in diagnosis of Scrub typhus and Monkeypox.[2] Moreover, the unexplained decline in the number of monkeypox cases, susceptibility of the Indian population to zoonotic infections and the increased risk for its resurgence makes it imperative to consider Monkeypox as a differential to Scrub typhus, particularly during the Indian monsoons and tropical regions of India.

END NOTE

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