

Southern Tick–Associated Rash Illness: Further Considerations

TO THE EDITOR—Southern tick–associated rash illness (STARI) continues to be an enigma despite years of research. While findings on STARI in the northern United States in the article by Feder et al [1], based on 1 patient from Long Island, cannot be expected to set a standard, the case supports points we have previously proposed: (1) Confusion exists between Lyme disease and STARI in reporting, diagnosis, and treatment, a problem well recognized in the southern United States and growing in recognition in the northern United States; (2) because of this, cases of Lyme disease are likely overreported in the northern United States and underreported in the southern United States; (3) patients should be taught to keep removed ticks; and (4) much more work needs to be done on diseases transmitted by *Amblyomma americanum* ticks, especially STARI's etiology and full clinical spectrum.

Feder et al's abstract [1] states that “the patient failed to respond to antibiotics used to treat Lyme disease.” In fact, because the patient was 2 years old, she was treated with amoxicillin only, not multiple antibiotics that would include doxycycline (typically not used on children <8 years of age). It cannot be inferred that other antibiotics used to treat Lyme disease, such as doxycycline, would fail to clear STARI's erythema migrans–like rash. In several papers, Masters [7] discussed patient responsiveness to doxycycline. In the days before the rash and illness from lone star ticks was called STARI, Kirkland et al [2] described 14 cases at a camp for adolescents in central North Carolina. All 14 were treated with 10 days of doxycycline and reported resolution of their symptoms and erythema migrans–like lesions. It is notable that the several positive enzyme-linked immunosorbent assays and Western blots for *Borrelia burgdorferi* from the patients were dismissed as false

positives [2]. It is interesting to contemplate the dilemma created by this practice. Without positives, there is no Lyme disease; if there is a positive, it is likely false.

In the early days of Lyme disease research, the lone star tick was considered a possible vector. Shulze et al [3] described 2 patients in New Jersey with erythema migrans and positive tests for Lyme disease from lone star tick bites. They isolated spirochetes from the ticks. These patients would now be considered to have STARI.

Whether *A. americanum* ticks can, at least occasionally, vector *B. burgdorferi* [4] may need to be revisited using modern techniques. In addition, the search for other *Borrelia* genospecies and strains, more varied in the southern United States [5, 6], may merit being widened. Non-*Borrelia* organisms also need to be sought in the quest for the STARI agent.

Years ago Kirkland et al [2] and Masters et al [7] pointed out that the natural history of STARI was unknown. This is still true today. There are no long-term studies on sequelae of untreated STARI, and such a study would be difficult, if not impossible, to conduct today due to evidence of illness from STARI [1, 2, 7] and modern requirements for informed consent.

In the era of evidence-based medicine, a single case report is contributory but not definitive.

Note

Potential conflicts of interest. Author certifies no potential conflicts of interest.

The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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