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Author title:	**An Unusual Case of Toxic Epidermal Necrolysis with Concomitant *Rickettsia rickettsii* Infection**
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Objective:	Upon completion of the lecture, attendees should be better prepared to: ▪ Discuss a rare presentation of Toxic Epidermal Necrolysis (TEN) in which the etiological trigger is ambiguous ▪ Consider *Rickettsia rickettsii* infections in the differential diagnosis for TEN
Abstract:	**Introduction:** Toxic Epidermal Necrolysis (TEN) is a severe hypersensitivity reaction that most commonly results after the exposure to medications like Allopurinol, Trimethoprim-Sulfamethoxazole, Carbamazepine and Phenytoin all of which predispose the patient to develop TEN. This dermatological emergency affects approximately 1/1,000,000 every year and, if left untreated it can be fatal. **Methods**: We present a case of a 40-year-old African-American male that was transferred to our facility with a generalized desquamating rash, fever and fatigue that initiated three days before admission. The rash was bullous, hyper-pigmented in several areas and the lesions yielded a positive Nikolsky Sign. A biopsy was obtained upon admission and the results were conclusive for TEN, but they were also suggestive of Rickettsial infection; the patient then had to be intubated due to involvement of the respiratory epithelium. One month before this event the patient was admitted to another facility due to alcohol-induced seizures, he was managed accordingly and discharged home on antibiotics. Upon acquisition of the medical records from the initial healthcare facility, it was noted that the patient had tested positive for Rocky Mountain Spotted Fever (RMSF) IgM serology. Confirmatory testing with Direct Fluorescent Antibody was then sent to the State laboratory and serology testing was repeated at our facility, yielding a positive result for RMSF IgG. The patient was empirically treated with Doxycycline and Immunoglobulin Therapy pending the laboratory results. The patient also underwent several visits to the operating room due to the extent of his wounds, requiring serial wound debridements and skin grafting with donated cadaveric skin substitutes. **Results:** After a month of medical and surgical management the patient improved clinically, was extubated and discharged home stable with outpatient clinic follow up appointments.

Conclusion: This case portrays an unusual presentation of TEN in which the etiology of the syndrome is questionable; did it emerged from the previous short-course of antibiotics or was it triggered by the concomitant RMSF infection? The rarity of this presentation opens the possibilities when considering TEN and also broadens the work up necessary to make it a final diagnosis.

References and Resources:

1. Argüelo AP, Hun L, Rivera P, Taylor L. Case report: a fatal urban case of Rocky Mountain Spotted Fever presenting an eschar in San José, Costa Rica. The American Society of Tropical Medicine and Hygiene. 2012; 87(2)345-348

2. Harr T, French LE. Toxic epidermal necrolysis and stevens-johnson syndrome. Orphanet Journal of Rare Diseases. 2010; 5;39-50

3. Klancir T, Adam VN, Matolic M, Stojcic GE, Ilic MK. Antibiotic-induced toxic epidermal necrolysis-a case report. Acta Dermatovenerologica Croatica. 2017; 25(1)72-76

4. Raczniak GA, Kato C, Chung I, Austin A, et al. Case report: co-infection of Rickettsia rickettsii and Streptococcus pyogenes: is fatal Rocky Mountain Spotted Fever underdiagnosed? The American Society of Tropical Medicine and Hygiene. 2014; 91(6)1154-1155

5. Rijal JP, Pompa T, Giri S, Bhatt VR. A case of toxic epidermal necrolysis by trimethoprim-sulfamethoxazole. BMJ Case Reports. 2014. doi: 10.1136/bcr-2013-203163

Disclosure:

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