

## Introduction

Trimethoprim-sulfamethoxazole induced aseptic meningitis (TSIAM) is a rare adverse drug reaction whose immunological basis is unknown, but based on symptoms is unlikely to be IgE-mediated. It typically presents with fever, headache, neck pain, and/or altered mental status; the presence and severity of concomitant symptoms can vary. We describe a case of severe TSIAM which occurred after oral challenge to a single dose of trimethoprim-sulfamethoxazole (TS) and initially presented similarly to septic shock.

### Typical CSF Findings By Meningitis Etiology

Labs (norms) <sub>1</sub>	Viral	Bacterial	Aseptic
Glucose (50-80 mg/dl)	Normal	Low	Normal
Protein (<45 mg/dl)	Elevated	Normal	Elevated
Total WBC (<5 µL)	<1000	>1000	Elevated
Predominant Cell	Lymphocytes	Neutrophils	Neutrophils

\*The opinions or assertions herein are the private views of the authors and are not to be construed as reflecting the views of the Department of the Air Force or the Department of Defense.

## Case Report

A 30-year-old male with relapsed Hodgkin lymphoma 25 days status post autologous stem cell transplant presented to our clinic for evaluation of trimethoprim-sulfamethoxazole (TS) hypersensitivity. History obtained described a prescription for TS 7 years prior in context of dysuria; the day after starting TS, he was admitted to an ICU for presumed sepsis with disorientation, vomiting, diarrhea, fever, myalgias, and a non-pruritic flat rash.

We had a low suspicion for a TMP-SMX adverse reaction based on this history and conducted an oral challenge to one 800MG/160MG tab of TS, after which he was monitored for two hours without concerns and released home. Four hours after oral challenge, the patient developed vomiting, lightheadedness, and disorientation with progression to rigors, fever, tachycardia, and hypotension. No urticaria, angioedema, wheezing, or respiratory distress was noted.

He was admitted for fluid resuscitation and broad spectrum antibiotic coverage for neutropenic fever and possible septic shock. A lumbar puncture performed due to complaints of headache, photophobia, and neck pain showed 375 WBC with 73% neutrophils, normal glucose (75 mg/dL), and elevated protein (101 mg/dL). CSF gram stain and culture, as well as urine and blood cultures, were negative.

Infectious CSF studies, to include acid-fast staining, fungal culture, viral culture, HSV PCR, arboviral PCR panel, Cryptococcus antibody/antigen, and adenosine deaminase levels, were obtained and all were inconsistent with infections. A complete course of antibiotics was ultimately completed given partially treated bacterial meningitis could not be ruled out. On hospital day 5, one day after his fever and headache resolved, patient was discharged home to complete his treatment course with levofloxacin

We believe this was TSIAM after exposure to TS. Resolution with resolution with infectious evaluation with TSIAM test (93%) with resolution (70%), and no resolution 24-48 hours of our patient, with admission for potential presentation and counsel for reactions.

1. Dorsett, M., & L. Infections in the E. America Vol 34 Is
2. Bruner, K., Coc meningitis—not ju 520-536.