

BLOOD, BLISTERS AND BREATHLESSNESS: AN ACUTE CASE OF METHOTREXATE TOXICITY

Tusharindra Lal

Department of Emergency Medicine, Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract

Methotrexate (MTX) is an anti-folate drug which is used in the treatment of various inflammatory and malignant conditions due to its efficacy and safe therapeutic utilization. However, it has the potential to cause serious, life threatening complications. [1]

A 50-year-old female presented to the ER with a history of fever for the past five days and bruises, blisters and oral bleeding for the past three days. She also had difficulty in breathing for the past day. On arrival, the carotid pulsation was absent and the cardiac monitor showed pulseless electrical activity (PEA) or cardiac arrest. As per the ACLS protocol, cardio-pulmonary resuscitation (CPR) was initiated and the patient was subsequently revived after 5 cycles of CPR. On examination, ecchymosis, blisters and bullae were noted on the extremities along with high colored urine and hematuria. Further history revealed that the patient was a known case of rheumatoid arthritis and was on MTX therapy for the past four years.

The patient was started on inotropes due to persistent hypotension as a result of delayed return of spontaneous circulation (ROSC). Investigations revealed a low Hb level, pancytopenia and elevated serum MTX levels. Fluid therapy, blood transfusion, anti-fibrinolytics were started in due course. Antidote, folinic acid was administered and the patient was

shifted to the ICU for further evaluation and management. Due to the extensive complications, the patient deteriorated and was declared dead after a day.

Acute methotrexate toxicity manifests itself in several forms including hepatotoxicity, pulmonary toxicity, acute renal failure, stomatitis, ulceration/erosion of the GI and pancytopenia. [2]

The authors would like to emphasize that MTX-induced pancytopenia (myelosuppression) is rarely reported but potentially fatal side effect of methotrexate therapy, even at low doses. It is a dose and duration-dependent complication with a female preponderance (62.51%) and should be recognized and treated promptly. [3]

MTX is one of the most widely used drug for dermatology, rheumatology and oncological diseases, however, careful monitoring of therapeutic dose and avoidance of self-administration is crucial to prevent and monitor such adverse outcomes in case of emergency. [4]

Biography

Tusharindra Lal is 4th year medical student at Sri Ramachandra Institute of Higher Education and Research, Chennai, India in the department of emergency medicine