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041. Methotrexate Toxicity: A Report From The ToxIC Registry

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Background: The epidemiology and scope of methotrexate toxicity are not well-defined.

Research Question: We aim to review all single-agent exposures to methotrexate recorded in the ToxIC registry to report case characteristics, use of antidotal therapy and patient outcomes.

Methods: This is a retrospective review of all single-agent exposures to methotrexate reported to the ToxIC registry from 2010 to 2022. Inclusion criteria were: single-agent exposure to methotrexate. There were no prespecified exclusion criteria. Data regarding case characteristics, treatments, use of leucovorin antidotal therapy, and patient outcomes are presented descriptively.

Results: A total of 72 cases were included in the dataset. The median age was 47 years (IQR: 22-67 years) and 55% were female. Twenty-six percent of cases were related to a medication error including administration and dosing errors, and 15% of cases were related to an attempt at self-harm. With respect to outcomes, 35% of cases had pancytopenia secondary to methotrexate, 18% of patients had acute kidney injury, and five patients (seven percent) died. With respect to therapies, four percent of patients required some form of renal replacement therapy. Additionally on review of free text listed in “other treatment”, 44% of cases received leucovorin and four percent received filgrastim/granulocyte colony-stimulating factor. With respect to disposition, seven percent of patients required admission to an intensive care unit. The in-hospital mortality rate was seven percent.

Conclusion: Although methotrexate is a relatively uncommon exposure, it is associated with significant morbidity and mortality.