

Idiosyncratic metronidazole-induced neutropaenia in an older adult

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April 05, 2024

Abstract

Metronidazole has a benign side effect profile during normal therapeutic use. An 84-year-old woman presented with recurrence of *Clostridium difficile* infection (CDI). She had received oral vancomycin 5 weeks ago and was prescribed oral metronidazole. There was progressive neutropaenia from day 1 of treatment. Metronidazole was stopped on day 8 and vancomycin was prescribed. Causality assessment via Naranjo algorithm demonstrated a probable adverse effect (8/10) in favour of metronidazole. Very severe neutropaenia on day 16 prompted administration of granulocyte colony stimulating factor (GCSF) for 72 hours. This resulted in transient neutrophilia which confirmed bone marrow integrity and supported a diagnosis of drug-induced myelosuppression. The neutrophil count slowly recovered to normal levels after 4 weeks. To our knowledge, this is the 4th report of metronidazole induced severe neutropenia (levels $<1 \times 10^9/L$). Unlike previous reports, we confirmed bone marrow integrity using GCSF. Unique to our case are the degree of neutrophil suppression and slow recovery of marrow function with a reversed neutrophil/lymphocyte ratio for >21 days.

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