

Typhlitis in a Neutropenic Patient

Neutropenic enterocolitis (NEC), also known as typhlitis, is a rare and life-threatening condition marked by inflammation and necrosis of the cecum due to microbial overgrowth, predominantly observed in neutropenic patients undergoing cytotoxic chemotherapy. The syndrome's cause is unclear, with no identified predictors. Treatment for NEC lacks substantial evidence.

A 66-year-old Caucasian male with a history of hypertension, cerebrovascular accident, laparoscopic cholecystectomy, and inguinal hernia repair underwent chemoradiotherapy (low dose carboplatin and paclitaxel) and daily radiotherapy followed by maintenance immunotherapy with Durvalumab for stage III non-small cell lung cancer. However, within half a year, he demonstrated disease progression, and was subsequently initiated on full-dose carboplatin and paclitaxel.

After receiving two cycles of a full dose of carboplatin and paclitaxel with granulocyte colony-stimulating factor support, the patient developed symptoms indicative of typhlitis, such as nausea, vomiting, diarrhea, abdominal pain, and intermittent fevers, leading to his presentation to the emergency department. Lab work was significant for a WBC of 0.2K/ μ L, absolute neutrophil count (ANC) of 0.0K/ μ L, anemia with a hemoglobin of 6.6g/dL, and thrombocytopenia. Imaging studies revealed bowel wall thickening and inflammation involving the small bowel, cecum, ascending colon, and appendix, consistent with NEC, and blood cultures identified *Clostridium septicum* bacteremia associated with typhlitis. Treatment with ceftriaxone and metronidazole was initiated until the ANC exceeded 0.5K/ μ L. Notably, the patient's symptoms improved without the need for surgical intervention. Upon discharge, the patient received oral levofloxacin and metronidazole for a total of two weeks.

NEC presents a life-threatening challenge in chemotherapy-treated neutropenic patients. The lack of clear predictors and an unclear pathogenesis complicate management. Timely recognition and appropriate antibiotic therapy, as illustrated in this case, can lead to a positive outcome without surgery. Further research is vital for improving prevention and management in high-risk populations.