

Tocilizumab

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Neutropenia: case report

A 68-year-old man developed neutropenia during anti-inflammatory therapy with tocilizumab.

The man presented to hospital with high-grade fever for the previous 10 days. He reported taking clarithromycin and oseltamivir for 3 days prior to admission, without improvement. Subsequent analyses led to the diagnosis of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), confirming Covid-19. He was intubated soon after admission due to worsening respiratory failure, and he started receiving off-label hydroxychloroquine for Covid-19. He also received azithromycin and meropenem. From day 3 to day 10 of admission, he additionally received anakinra. However, 13 days following admission, he exhibited significant deterioration and respiratory worsening. He developed signs of ischaemia and cytokine release syndrome, with increased inflammatory parameters. Hence, he started receiving an infusion of 400mg tocilizumab over 2 hours, with good preliminary results. However, he developed neutropenia secondary to tocilizumab [*time to reaction onset not stated*].

The man's neutropenia resolved with one dose of filgrastim. However, he was soon diagnosed with acute myeloid leukaemia, and on day 45, he developed sepsis and exhibited severe deterioration. He ultimately died due to candidaemia and *Pseudomonas aeruginosa* bacteraemia.