BSH2021

Transplantation, gene & cellular immunotherapies

BSH2021-525

Cessation of ciprofloxacin prophylaxis in haemato-oncology patients at a London teaching hospital

Louise Caldwell[*1], Samir Agrawal[1,2], Anjaneya Bapat[1], Jonathon Lambourne[1]

[1]St Bartholomew's Hospital, [2]Immunobiology, Blizard Institute, Queen Mary University of London, London, United Kingdom

Please indicate your preferred method of presentation: Oral or Poster
Do you wish to be considered for a BSH Abstract Scholarship?: Yes
I agree to the terms below for the BSH Abstract Scholarship: Yes
Has this abstract been presented at a UK national haematology meeting before?: No
Has this abstract been presented at an overseas meeting?: No
Does your abstract relate to either of the following aspects?: No
Please select your position from the following list:: Other

Abstract Content: Immunosuppressed patients comprise a vulnerable group to infection; haemato-oncology patients are at a threefold higher risk of bacteraemia as compared to oncology patients. Despite advances in the recognition of sepsis, Gram-negative bacteraemia continues to be a significant cause of mortality and morbidity in those with haematological malignancies.

International guidelines, including NICE (National Institute for Health and Care Excellence) and ASBMT (American Society for Blood and Marrow Transplantation), recommend fluoroquinolone prophylaxis following stem cell transplantation and in expected prolonged neutropenia following chemotherapy. However, a growing number of centres are not including this in local protocols. This follows significant increases in fluoroquinolone resistance in Gram-negative bloodstream infection nationally as well as concern regarding the impact of prolonged courses of broad spectrum antibacterials on the microbiome and other deleterious side effects.

We looked at the impact of a change in local policy at a single tertiary transplant centre in London, where ciprofloxacin prophylaxis was discontinued in September 2019. We retrospectively analysed all cases of E. coli bacteraemia in haemato-oncology inpatients at St Bartholomew's Hospital who had been admitted for intensive chemotherapy or stem cell transplantation between April 2017 and April 2020. E. coli bacteraemia is by far the most common Gram-negative bloodstream infection in our practice.

38 patients were analysed in total; 29 patients meeting the criteria were on ciprofloxacin prophylaxis and 9 patients were on no antibiotic prophylaxis. 17% of the patients taking ciprofloxacin prophylaxis were admitted to intensive care compared with 11% of patients not on prophylaxis. Average survival was 93% at 7 days and 86% at 30 days in the prophylaxis group compared with 100% at 7 and 30 days in the no prophylaxis group. The average length of admission between the two groups was 33.2 days for those taking ciprofloxacin and 34.5 days for those not. Rates of ciprofloxacin-resistant E. coli bacteraemia were 48% in the prophylaxis group and 33% in the no prophylaxis group. Extended spectrum beta-lactamase (ESBL) resistance mechanisms were also more frequent in the prophylaxis group (31%) than the no prophylaxis group (22%).

We found a lower rate of resistant E. coli bacteraemia, with no increase in mortality or ITU admissions for our patients not on ciprofloxacin prophylaxis. The data from this small sample set so far supports the cessation of ciprofloxacin as routine Gram-negative prophylaxis for haemato-oncology inpatients at St Bartholomew's Hospital. We are performing an ongoing detailed audit of antimicrobial management to provide an accurate denominator for the assessment of the incidence of E. coli bacteraemia, other bacterial infections, global antimicrobial usage and infection outcomes.

Disclosure of Interest: None Declared