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Background

- Optimal duration of empiric antibiotics in high risk FN-FUO remains controversial.
- Emerging evidence suggests early antibiotic discontinuation at 72 hrs of apyrexia is safe, regardless of neutrophil count¹.
- We sought to evaluate antibiotic prescription practices among febrile neutropenic patients in our community hospital in order to identify antimicrobial stewardship opportunities.

Methods

- Retrospective cohort from 1/1/20 – 12/16/21
- Inclusion criteria were admitted patients with AML + FN-FUO.
- Descriptive statistics of the following data points:
 - Initial IV antibiotic choices
 - Vancomycin use and its congruence with IDSA guidelines²
 - Mean days of IV antibiotic therapy (DOT)
 - Mean and total days of “excess” IV antibiotic therapy (DOET), defined as excess empiric antibiotic therapy after >72 hours of apyrexia.

Results

- 65 patients screened, 27 included
- Cefepime was the preferred β-lactam (85%)
- While the mean duration of fever was 4 days (Table 1/Figure 1), the mean duration of empiric antibiotic therapy was 10 days (Table 2/Figure 1)

References

1. Aguilar-Guisado M, et al. Optimisation of empirical antimicrobial therapy in patients with haematological malignancies and febrile neutropenia (How Long study): an open-label, randomised, controlled phase 4 trial. *Lancet Haematol.* 2017
- 2.- Alison G. Freifeld, et al. Clinical Practice Guideline for the Use of Antimicrobial Agents in Neutropenic Patients with Cancer: 2010 Update by the Infectious Diseases Society of America, *Clinical Infectious Diseases*, 2011
- 3.- Wright JD, et al. Deviations from guideline-based therapy for febrile neutropenia in cancer patients and their effect on outcomes. *JAMA Intern Med.* 2013

Identifying concrete antimicrobial stewardship targets in immunosuppressed populations in local hospitals may help better guide interventions to address them, as both knowledge gaps and opportunities for improvement exist.

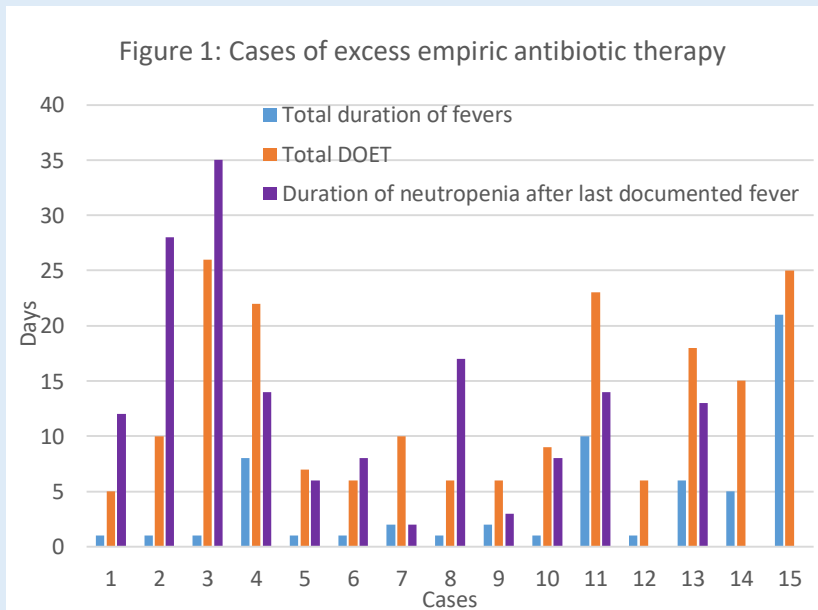


Table 1. Baseline Characteristics (n = 27)

Age, mean (IQR)	64 (59-73)
Female sex, n (%)	10 (37)
Days of neutropenia after first fever, mean (range)	12 (1-42)
Days of fever after first fever, mean (range)	4.8 (1-21)

Table 2. Antibiotic Use

	Cases (%)
Empirical vancomycin used	15 (55)
Congruent use of empiric vancomycin with IDSA Guideline	10 (66)
Days of empiric antibiotic therapy, mean (range)	10 (3-26)
# of cases receiving excess empiric antibiotic therapy	15
DOET, mean (range)	3 (0-22)
Total DOET, days	87

Discussion:

- Antimicrobial stewardship (ASP) in hematologic malignancy populations is a growing field.
- Little is known about antibiotic prescription practices in these patients in community hospitals.
- Our findings highlight potential concrete ASP targets, such as mean and total days of excessive therapy if an early de-escalation approach were to be followed when appropriate.
- Shortening this knowledge gap may serve as the first step to guide the development of an institutional guideline as these have been previously shown to improve clinical outcomes³ in this overall underrepresented population.