ANALYSIS OF THE CEFTAROLINE ASSOCIATED NEUTROPENIA

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BACKGROUND AND IMPORTANCE

CEFTAROLINE
- New 5th generation cephalosporin
- Treatment of severe pneumonia and skin and soft tissue infection
- Particularly effective against Methicillin-Resistant Staphylococcus Aureus (MRSA) and penicillin-resistant strains of Streptococcus pneumoniae
- Some studies associate prolonged use of ceftaroline with a higher incidence of neutropenia.

AIM AND OBJECTIVES
To study the incidence and causality of the onset of neutropenia associated with the use of ceftaroline in routine clinical practice.

MATERIALS AND METHODS
Retrospective observational study in a tertiary hospital

April 2017 – July 2020

Inclusion criteria: adult patients treated with ceftaroline during for >7 days.

Exclusion criteria: Onco-haematological patients and/or Neutrophil count <1500 cells/mm³

Demographic variables, diagnosis, treatment characteristics, admission in intensive care unit, neutrophil count were recorded

Causality was analysed with Naranjo Adverse Drug React Probability Scale.

RESULTS

41 PATIENTS 78%

69 ± 11 YEARS CCI 6 ± 2

Median length of treatment (days) (IQR: 8-12.5)

22% 78%

7% of patients had SEVERE neutropenia

Median onset: 6 days (IQR: 4-7)

15% of patients had a nadir count of <1500 neutrophils/mm³

MRSA was isolated from blood cultures in 20% of cases

Only one of the neutropenic patients received a dose of G-CSF⁴

In all cases, the neutropenia was considered to be “possibly” associated with ceftaroline

CONCLUSION AND RELEVANCE
In patients treated with ceftaroline, neutropenia is an adverse effect that must be considered. More studies are needed to confirm this causality.

1 ICU: Intensive Care Unit 2 CRBSI: catheter-related bloodstream infection 3 PJI: Prosthetic Joint Infection 4 G-CSF: Granulocyte-Colony Stimulating Factor