FILGRASTIM 300MCG ON DAYS 8 AND 12 FOR THE AC-T DOSE-DENSE REGIMEN

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BACKGROUND

In the AC-T dose-dense regimen, administered every 2 weeks, it is often necessary to use hematopoietic growth factors such as filgrastim (G-CSF) 5 mcg/kg subcutaneously, rounded to 300 mcg or 480 mcg, on days 3 through 10, or pegfilgrastim 6 mg subcutaneously on day 2 or 3 of each cycle. However, administering filgrastim subcutaneously from days 3 to 10 is inconvenient for patients, and pegfilgrastim 6 mg SC after chemotherapy may result in overlapping doses when used every 2 weeks.

We modified the protocol by using filgrastim 300 mcg SC on days 8 and 12 after chemotherapy, based on the nadir timing of this regimen.

PATIENTS AND METHODS

This study included all breast cancer patients treated with the AC-T regimen every 2 weeks, using the modified dosing protocol with filgrastim support (on days 8 and 12). Data were collected from January 1, 2013, to December 31, 2020, at Medic Center, Duc Khang Hospital, and Van Hanh Hospital in Ho Chi Minh City, Vietnam. Side effects assessed included anemia, neutropenia, thrombocytopenia, and bone pain following the use of filgrastim.

RESULTS

A total of 790 breast cancer patients received the AC-T regimen, comprising:

- **AC (doxorubicin + cyclophosphamide)** every 2 weeks for 3160 cycles.
- **Paclitaxel** every 2 weeks for 3160 cycles.

Filgrastim was administered at a dose of 300 mcg on days 8 and 12 during the AC regimen, with no filgrastim support used during paclitaxel treatment.

- Median age: 45 years (range 28–60).
- Median weight: 55 kg (range 38–96 kg).
- 100% of patients tolerated the regimen without discontinuation of chemotherapy.
- Grade 2–4 anemia: 0%.
- Neutropenia: 0.07% during AC, 1.01% during paclitaxel.
- Grade 2–4 thrombocytopenia: 0%.
- Bone pain: 15% after the second dose of filgrastim.
- No deaths occurred during chemotherapy.

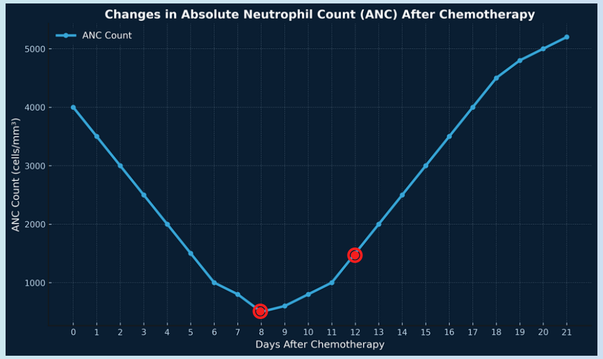

Figure 1. Changes in absolute neutrophil count (ANC) after chemotherapy

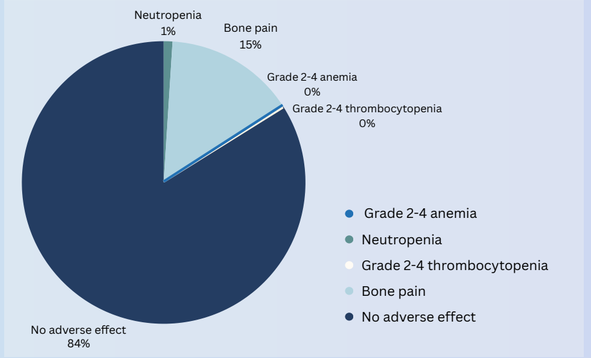

Figure 2. Distribution of Adverse effects in Filgrastim 300 mcg Protocol

CONCLUSION

The results demonstrate that the dose-dense AC-T regimen (administered every 2 weeks) requires only filgrastim support at 300 mcg on days 8 and 12 during AC treatment, with no filgrastim needed during paclitaxel cycles. This protocol is highly safe, well-tolerated, and associated with acceptable side effects.

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