Programme de
GESTION THÉRAPEUTIQUE
des médicaments

PGTM Clinical Intervention Model (CIM)

Descriptive analysis of the use of filgrastim in Quebec's university teaching hospitals (UTHs) - 2018

Background: The introduction of granulocyte-colony stimulating factors into clinical oncology practice is clearly a major advance in cancer treatment. Used in primary and secondary prophylaxis, filgrastim has shown its ability to significantly reduce the duration of neutropenia and the risk of infection that can occur following myelosuppressive chemotherapy. However, as for the treatment of already-established febrile neutropenia (FN), while this might be an appealing idea, no clear data have confirmed any benefit in terms of infection-related mortality or patient survival.

Filgrastim is very widely used and is probably overused. Two groups recognized in the field of oncology, ASCO (American Society of Oncology) and the CCO (Cancer Care Ontario), have even called for better guidance for its use, both in the prophylaxis and treatment of FN.

The PGTM's scientific recommendations

In light of the results obtained, the following recommendations can be made:

For the treatment of FEBRILE NEUTROPENIA:

- Develop and disseminate criteria for using filgrastim based on the main published guidelines available in 2018 to guide prescribers and to harmonize the rules for using it in the UTHs;
- Locally ensure, by means of a drug utilization review (DUR), preferably prospective, that the use of filgrastim for treating FN is optimized in accordance with the hospital's updated criteria.

For PRIMARY prophylaxis:

- Review, on the basis of the CCO's lists and the algorithms available on the GEOQ's website, the standing orders to assist in the prescribing of filgrastim as primary prophylactic therapy;
- Determine, on an ongoing basis, the risk of FN (high, moderate or low) associated with any new chemotherapy protocol, in regards to scientific literature and the characteristics of the drugs in the protocol;
- Ensure locally, by means of a DUR, preferably prospective, that filgrastim is being used appropriately in primary prophylaxis, based on the myelosuppressive risk associated with the chemotherapy protocol, the patient's risk factors and those associated with his/her disease, whether in the outpatient clinic or hospital ward.

Other:

- Reassess the need to prescribe filgrastim and regulate its prescription for indications other than the approved ones in the product monograph (e.g., afebrile neutropenia or increasing the neutrophil count prior to chemotherapy);
- Conduct better monitoring of the duration of treatment and treatment discontinuation on the basis of the absolute neutrophil count.

Programme de
GESTION THÉRAPEUTIQUE
des médicaments

PGTM Clinical Intervention Model (CIM)

Descriptive analysis of the use of filgrastim in Quebec's university teaching hospitals (UTHs) - 2018

Objective: To promote optimal filgrastim use in the UTHs.

Intervention measures: Each institution is to determine which interventions apply to its situation and to make one or more of them priorities.

Timetable: Institute applicable measures at each UTH within 12 months of March 2018.

Intervention plan for the PGTM's filgrastim CIM:

1. Present the results to the Pharmacy and Therapeutics Committee and/or the Cancer/Oncology Subcommittee, if applicable, and to other committees concerned, if relevant.
2. Present the local results to the clinical practitioners concerned, specifically, hematologists/oncologists, pharmacists, critical care physicians, emergency physicians, etc.
3. Together with the hematologists/oncologists, develop a collaborative plan for monitoring inpatients' absolute neutrophil count so that a decision to continue or stop filgrastim therapy can be made and recorded in a timely manner and before the daily dose is prepared. This plan should apply to all the care units (including the emergency department), seven days a week.
4. Together with the hematologists/oncologists, develop an algorithm/decision tree, which is to include the risk factors to be monitored, for justifying the use of filgrastim for already-established FN.
5. Improve the standing chemotherapy orders by indicating on them, as is done for the emetogenic potential, the risk of FN (low, moderate or severe). If the risk is moderate, the practitioner should indicate the risk identified on a line provided for this purpose on the order. If the risk is low, a note should mention that the use of filgrastim will need to be discussed.
6. Develop a standing order as soon as possible when a new chemotherapy protocol is used.
7. Carry out a follow-up study in the form of a drug utilization review, preferably prospective, to check if filgrastim is being prescribed in accordance with the inpatient FN algorithm (or with the criteria on the standing order specifying the potential risks to be identified).
8. Carry out a follow-up study in the form of a drug utilization review, preferably prospective, to check if the use of filgrastim in the outpatient clinic medication orders is compliant for outpatient primary prophylaxis.
9. Require, on a case-by-case basis, a special medical need request when filgrastim is to be used for off-label indications, based on RAMQ criteria (e.g., afebrile neutropenia in inpatients or increasing outpatients' neutrophil count prior to chemotherapy).