Many chemotherapy regimens used today require the support of a granulocyte–colony-stimulating factor for the prevention of life-threatening neutropenia. In March 2015, a delivery method was introduced for Neulasta® (pegfilgrastim) through an on-body injector (Onpro®), which may eliminate the need for patients to return for injection after chemotherapy, increase workflow, and allow more patients to be seen. The purpose of this study was to monitor the implementation of the Onpro delivery system in an outpatient facility.

AT A GLANCE

- The administration of pegfilgrastim via an on-body injector is a safe and effective alternative to manual injections.
- The use of on-body injectors is associated with high patient satisfaction.
- Patient use of on-body injectors has improved nursing unit workflow.

KEYWORDS
pegfilgrastim; febrile neutropenia; patient satisfaction; on-body injector

DIGITAL OBJECT IDENTIFIER
10.1188/17.CJON.121-122

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On-Body Injector

An administration device for pegfilgrastim

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Febrile neutropenia is a potentially life-threatening side effect of chemotherapy, which is why it is often administered with a granulocyte–colony-stimulating factor (G-CSF). Primary prophylaxis with a G-CSF starting with the first cycle and continuing through subsequent cycles of chemotherapy is recommended in patients who have a 20% or higher risk for febrile neutropenia based on disease and treatment-related factors (Smith et al., 2015). A new delivery kit for Neulasta® (pegfilgrastim) was introduced in 2015, featuring the on-body injector (OBI) Onpro®. The device has a timed mechanism to deliver an injection 27 hours after the device is placed on a patient. This delivery method eliminates the need for patients to return to healthcare facilities for injections after chemotherapy. Because pegfilgrastim and the OBI are used only in oncology practice, this is a topic of significant importance to oncology nursing. The goal of this study was to deliver pegfilgrastim via the OBI safely and effectively and to ensure that patients in an outpatient cancer center were satisfied with the delivery system. In addition, the effects of this new device on outpatient clinic workflow were evaluated, and reimbursement issues were monitored.

Methods

Outpatient oncology nurses received education and training related to the use and application of the pegfilgrastim OBI on patients and how to educate patients through a series of in-services taught by a nurse educator in the center and a nurse educator from Amgen, Inc. The education consisted of an oral presentation with a hands-on demonstration of how to use the training devices. Afterward, the experienced nurses partnered with others to assist with initial applications.

All patients who were eligible for a standard pegfilgrastim injection were eligible to receive the OBI delivery kit. Patients were excluded if they were cognitively impaired, to avoid the removal of the device at an inappropriate time; were receiving radiation therapy; or were scheduled for imaging studies. Patients were given the opportunity to view the product video supplied by Amgen, Inc. Education was provided by the trained oncology nurse during the patient's treatment. In addition to a comprehensive OBI brochure, patients received a one-page information sheet adapted from the Amgen, Inc., patient guide, which summarized key points and instructions related to the recognition of potential device failure.

The OBI was applied by the oncology nurse within the last hour of the patient's treatment. Patients were contacted by phone within 48 hours of placement to confirm dose delivery. If patients experienced device failure, leakage, or dislodgement, they were instructed to remove the device and return to the clinic for a manual injection.

Results

A total of 41 patients were given 104 doses of pegfilgrastim via the OBI from September 1, 2015, to January 5, 2016. After the initial four-month period,