



Dermatologic Assessment From a Distance: The Use of Teledermatology in an Outpatient Chemotherapy Infusion Center

Jeanine Gordon, RN, MSN, OCN®

Treatment-related dermatologic toxicities are common for patients with cancer. Rashes associated with dermatologic toxicities are best treated by a physician who specializes in dermatologic conditions resulting from cancer treatment, but scheduling and travel may present challenges for patients. This article describes a pilot project in which nurses used telemedicine technology to facilitate patient visits with an off-site dermatologist.

Jeanine Gordon, RN, MSN, OCN®, is a nurse leader in the Brooklyn Infusion Center at Memorial Sloan-Kettering Cancer Center in New York, NY. The author takes full responsibility for the content of the article. The author did not receive honoraria for this work. No financial relationships relevant to the content of this article have been disclosed by the author or editorial staff. Gordon can be reached at gordonj1@mskcc.org, with copy to editor at CJONEditor@ons.org.

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After being diagnosed with metastatic colon cancer, C.G., a 56-year-old woman, had a liver resection and was treated with hepatic arterial and systemic chemotherapy. She has received three cycles of maintenance therapy of irinotecan and cetuximab weekly and has tolerated the treatment fairly well. She visited her oncologist at the institution's main campus on the first week of every cycle and received her infusions at the institution's new innovative chemotherapy infusion center. The center is located six miles away from the main campus, but is much more convenient and closer to C.G.'s home.

C.G. presented to the infusion center with a new rash to her face, neck, and trunk during her prechemotherapy assessment. On physical assessment, the chemotherapy nurse discovered grade 2 papulopustular eruptions with erythema and pruritus on those sites. The oncologist was contacted to discuss findings and decided to withhold treatment for the day. The oncologist also ordered a consult with the dermatologist at the institution's main campus. The chemotherapy nurse contacted the

dermatologist's office and facilitated the dermatology visit using telemedicine technology. The dermatologist assessed the rash via a high-resolution total body examination camera and collaborated with the infusion site nurse practitioner to order minocycline 100 mg twice daily and topical tazarotene to treat the rash. C.G. returned in one week and stated that the rash resolved; she continues maintenance therapy without incidence.

Background

Dermatologic toxicities related to cancer treatments, particularly the administration of chemotherapy and biotherapy agents, are common for patients with cancer. Drug categories such as tyrosine-kinase inhibitors and epidermal growth factor receptor inhibitors (EGFRIs) are known for causing acneform eruption; follicular acneform eruption; folliculitis; and papulopustular, acneform, macropapular, or maculopustular rash (Segaert & Van Cutsem, 2005). Although mild to moderate in severity, skin rash can have a significant negative effect on patients' quality of life. In addition

to dryness and itching that can be very uncomfortable, people often are self-conscious about the rash, which frequently appears in highly visible areas such as the face, neck, and chest (Oishi, 2008). Clindamycin gel and hydrocortisone cream usually are prescribed proactively to treat mild rashes.

Rash is believed to be the most common cutaneous adverse effect of EGFRIs, with almost 100% of patients reporting rashes in some trials (Segaert & Van Cutsem, 2005). EGFRIs include cetuximab, panitumumab, erlotinib, gefitinib, and lapatinib, which are used to treat a wide range of cancers. Those drugs are administered as single agents and in combination with other systemic chemotherapy.

Rash has been cited as a cause of treatment cessation or dose modification. Although mixed, most data support the correlation between rash and outcomes in patients treated with EGFR therapy (Lacouture et al., 2011). An estimated 8%-17% of patients change or stop their treatment because of moderate or severe adverse cutaneous effects (Lacouture & Lai, 2006). Oncology nurses caring for patients experiencing dermatologic toxicities must properly assess and manage those toxicities. In addition, dermatologists must be able to properly diagnose those side effects and differentiate them from other skin disorders (Agero et al., 2006).

Telemedicine Pilot

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status (American Telemedicine Association, 2011).