

Compounding Opportunities for Oncology Patients

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Introduction



Pharmaceutical compounding corresponds to the preparation of customized medicines in order to meet the specific needs of patients. Oncology patients, in particular, benefit from a personalized approach to treatment considering the complex, and often critical, health conditions of these vulnerable patients that may not always be treated with the proprietary medicines available (Carvalho, 2012). By working closely with patients and practitioners, compounding pharmacists are able to provide alternative dosage forms, strengths and drug combinations adapted to each individual situation (McElhiney, 2008). Compounding pharmacists are thus in a unique position to cater to the patient in the treatment for cancer (Maddox, 2000). A selection of three case reports will be presented as compounding opportunities for oncology patients.

Case Reports



Compounding Opportunity 1: Chronic Pain

A female patient with a metastatic cancer and a great deal of pain became unable to swallow the oral methadone prescribed. Alternative rectal suppositories were not an option due to the difficulties associated with moving the patient and subcutaneous injections were very painful at the site of administration. The compounding pharmacist provided topical methadone in Lipoderm, a proprietary transdermal base, which resulted in a very successful treatment for the last weeks of her life (Love and Bourgeois, 2014). Topical compounded creams for the treatment of pain are commonly used in clinical practice. According to a brief survey on prescriber beliefs regarding compounded topical pain medications, the vast majority of practicing prescribers believe that compounded pain creams are more efficacious than the mass-produced, U.S. Food and Drug Administration-approved creams (Warner and Tuder, 2014).

Compounding Opportunity 3: Oral Mucositis

Approximately 100% of the patients receiving high-dose head and neck radiation therapy develop severe oral mucositis and there are many opportunities for compounding pharmacists to compound efficient, evidence-based preparations to prevent or treat oral mucositis (Zur, 2012). Compounded medicines for oral mucositis play a major role in the quality of life of cancer patients (McElhiney, 2008).

Compounding Opportunity 2: Radiation Burns

A 72-year-old male was diagnosed with an acinic cell carcinoma, a malignant epithelial neoplasm in which the neoplastic cells express acinar differentiation. Following diagnosis, the patient was subjected to a surgical removal procedure and 33 sessions of radiation therapy on the right side of his head and neck. The area exposed to radiation got burnt and, therefore, it was extremely sensitive, dry and scaly (Figure 1), which resulted in increasing pain and discomfort for the patient. The patient was then recommended to apply a proprietary compounding anhydrous silicone base containing Pracaxi oil. Silicones have been widely used for their occlusion and hydration properties, which are essential in scar management. Pracaxi oil, extracted from the oilseed plant *Pentaclethra macroloba* found in Brazil, has several medicinal applications including skin regeneration and healing. Following 4 days of treatment, the patient acknowledged significant healing and tissue re-growth. By day 10, the radiation burn was almost completely healed and pain free (Figure 2); by day 14, the skin was smooth, soft and pink (PCCA, 2014).



Figures 1 and 2. Lateral side of the face (before and 14 days after treatment)

A 75-year-old female was diagnosed with a stage III invasive breast cancer and 11 lymph nodes. The patient was thus prescribed a treatment regimen of chemotherapy followed by 40 sessions of radiotherapy. At session number 10, the patient developed radiation burns on the front and back of her shoulder, on her face and under her arm. The proprietary creams prescribed were not successful and the burns got worse with time. The patient was then recommended a compounded medicine with Beta Glucan 0.25%, Vitamin E Acetate 2% and Vitamin D3 0.5% in the anhydrous silicone base containing Pracaxi oil, to be applied twice a day in all affected areas. The burns on her shoulder healed within 10 days whereas the facial burns healed in just a few days.

Conclusion



Oncology patients present practitioners and compounding pharmacists with the challenge of providing a personalized approach to treatment. Pharmaceutical compounding represents thus an invaluable opportunity for these particularly vulnerable patients.

References



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