Oral anti-cancer agents: A paradigm change in cancer treatment

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In 2003, Birner reported that one quarter of the 200 cancer drugs in development were oral and she expected this proportion to increase over the next decade.1 And she was right: oral treatments make up approximately half of all the drugs reviewed by the pan-Canadian Oncology Drug Review (pCODR) in the past 2 years. Oral chemotherapy offers patients the convenience of undergoing treatment at home and avoiding multiple visits to ambulatory centers.2,3 It also spells a major change for oncology practice. The oncology community has developed numerous best practice standards to ensure the safe and effective delivery of intravenous cancer treatments. However, we know that our systems sometimes fail and that medication errors are a reality. Taylor and Winter4 summarized 3 key steps to ensure patient safety during chemotherapy:

1. The physician must prescribe correctly.
2. The pharmacist must interpret the order and fill the prescription correctly.
3. The nurse must administer the medication correctly.

When we compare the processes used in each of these 3 steps for oral and intravenous cancer therapy, it is easy to understand the concerns expressed by many oncology professionals. While the accepted standard for prescribing intravenous chemotherapy is computerized physician order entry systems or preprinted orders, a recent survey of Canadian cancer agencies indicated that 44% of oral chemotherapy prescriptions are still handwritten.5 In the majority of large cancer agencies, pharmacists and pharmacy technicians dispensing intravenous cancer therapy are very familiar with cancer drugs, dosages and indications. For oral cancer therapies, we see a hybrid of cancer agency dispensing in the Western provinces and community pharmacy dispensing in the Eastern provinces.6 A survey of community pharmacists in Canada found that many among them do not have a strong foundational knowledge of cancer treatment and lack specific education in oncology.7 With oral therapies, there is no oncology nurse present at the time of administration, raising a number of safety issues, not least that prescribing errors missed by the pharmacist are unlikely to be detected by the patient or family caregiver and may go uncorrected until the patient’s next followup appointment. In the setting of intravenous treatment, nurses are also valuable in the management of toxicities and assessment and monitoring of adherence.

The potential gaps in care and anticipated steady increase in the availability of oral cancer therapies pose significant challenges for cancer agencies, but also present considerable opportunities to use our healthcare resources differently and perhaps more efficiently. Oncology pharmacists and nurses have opportunities to play a greater role in the care of patients receiving oral cancer treatments in the community. Certain cancer agencies and programs in Canada have seized these opportunities and developed very progressive and proactive care models for patients receiving oral cancer drugs. In Newfoundland and Labrador, oncology pharmacists educate and counsel patients who are starting oral therapy. They perform medication reconciliation, check for drug interactions, evaluate patients in the community clinic during the first and second cycles, and provide telephone followup to assess toxicity and adherence between cycles. Centre-specific outcome data in Newfoundland and Labrador measuring the impact of a weekly clinical pharmacy and general practitioner in oncology (GPO) toxicity and adherence monitoring program for patients receiving capecitabine showed a decrease in emergency room visits, hospital admissions and therapy discontinuation. Such programs are critical to providing safe and effective oral cancer treatments. Without a comprehensive toxicity management and adherence assessment program, oncologists would be assessing response to therapy without knowing the degree of adherence to the treatment regimen.

As cancer care providers, we are challenged to ensure that patients on oral cancer therapy have a standard of care equivalent to patients on intravenous therapy. A robust patient educational component is needed to address safety and adherence, with followup programs to ensure the proactive management of toxicities and assess treatment efficacy. The development of national practice standards that encompass prescribing, dispensing, education and followup to manage toxicities and adherence is a key step to improving the processes involved in oral chemotherapy. The Canadian Association of Provincial Cancer Agencies (CAPCA) has drafted standards for oral cancer therapy and is currently in the process of seeking stakeholder feedback. You may contact CAPCA’s Executive Director, Heather Logan, by email (hlogan@capca.ca).

References:
4. Taylor J and Winter L. Cancer 2006;107(6)