Polypharmacy: evaluation of medication management

The use of multiple medications and inappropriate medications can severely compromise cancer management plans. In view of the risks involved, specific guidelines are urgently needed to regulate the management of polypharmacy in older adults with cancer.

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Polypharmacy is a significant public health problem that disproportionately affects older adults, particularly those with multiple comorbid conditions. It is commonly defined as concurrent use of five or more medications, including prescription, non-prescription and complementary and herbal supplements.1-3 Polypharmacy can also be defined by the use of potentially inappropriate medications (PIM), which are associated with an increased risk of adverse drug effects in older adults. Bushardt et al.4 suggested that there are 24 distinct definitions of polypharmacy, ranging from unnecessary or inappropriate medication use to excessive numbers of medications.

While the use of many medications may be good practice for the treatment of some chronic medical conditions, the addition of cancer-related therapy to existing polypharmacy is problematic. The multiple layers of specialists, primary care, and allied health professionals in the continuum of care makes this population particularly prone to errors attributed to medication changes, complex regimens, and incomplete information handoff between providers. This means there may be an increased risk for adverse drug events, drug-drug interactions, non-adherence and in some cases of hospitalisation and increased healthcare utilisation.5-11

The National Comprehensive Cancer Network (NCCN) Older Adult Oncology Guidelines recommend a thorough evaluation for polypharmacy and potentially inappropriate medications.12 (Patients should also be asked about herbal medications.) The prevalence of polypharmacy in the ambulatory older adult oncology population ranges from 48 to 80%, and of potentially inappropriate medication from 8 to 51%.13-17 This variability may be attributed to the methodology, e.g. self-reports, medical records extraction, pharmacist assessment, screening tools and terms for defining polypharmacy and inappropriate medications.

Identifying and categorising potentially inappropriate medications is also complex: there are medications lacking evidence-based indications, those with treatment risks that outweigh benefits, those significantly associated with adverse drug reactions, or those that may potentially interact with other medications or diseases.18 The most current, evidence-based, validated criteria and screening tools to capture potentially inappropriate medications include the 2015 Beers criteria, the Screening Tool of Older Persons’ Prescriptions (STOPP) and the Medication Appropriateness Index.19-23

Polypharmacy and potentially inappropriate medication use warrant substantial concern among oncology healthcare teams, because of the perils associated with their use in this vulnerable population – such as increased risk of falls and/or fractures and cognitive impairment – all of which can lead to compromised cancer management plans.

How do we address these issues? The ‘brown bag’ method is highly recommended and involves the patient bringing all medicines into the clinic for a provider to review. In addition, the clinician can assess patients’ ability to read medication label directions, self-administer and manage medications in an organised manner. However, currently, there is not a consensus or specific guideline on the management of polypharmacy in older adults with cancer. Well-designed, inter-professional studies that measure patient-reported outcomes and quality improvement are needed to evaluate medication management interventions in this complex and vulnerable population.

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