

Symptom Management with Chemotherapy: Improving Effectiveness Using Technology Among Geriatric Oncology Patients

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PICOT Question

In geriatric oncology patients > 60 years of age, newly diagnosed with cancer, would the use of video games, yoga, music therapy, and EB education reduce incidences of adverse effects from chemotherapy compared to traditional educational handouts in a 3-month period?

(P) Population • > 60 years old or newly diagnosed with cancer

(I) Intervention • Use of video games to educate about symptom management

(C) Comparison • Compare traditional vs non-traditional forms of education

(O) Outcome • Symptomatic relief and management of chemotherapy induced adverse effects



Literature Search Criteria

Database: UH Library Database, CINAHL

Dates: 2017-2022

Peer reviewed journal, scholarly journals

Keywords:

- Geriatric oncology & video games
- Effects of chemotherapy
- Oncology education
- Coping strategies & adherence to treatment
- Symptom management & self-management



Background

Treatment with chemotherapy is known for its many hindering adverse effects to patients' quality of life. Chemotherapy has shown to induce adverse effects including nausea, vomiting, fatigue, and stress.^{1,2} The use of video game simulations reinforce education and allow patients to take control of self-management interventions.³ Pharmacological interventions are effective, but patients need to receive evidence-based education.⁴ Adherence to antiemetic medications have variable outcomes in treatment of said adverse effects.⁵ Polypharmacy also plays a role that could negatively impact patient's symptom management.⁶ Providing patients with proper and evidence-based education through methods like video games, yoga, music therapy, and evidence-based education can positively impact their self-management of their symptoms.^{2,3,7,8}

Synthesis of Findings

- Nonpharmacological measures to relieve oncological adverse effects in the geriatric population has been effective in self-management of nausea, vomiting, fatigue, pain, and anxiety.^{2,3,7}
- Geriatric patients are often overloaded with polypharmacy and often the medications aren't effective in relieving their symptoms. It has been shown that proper adherence to antiemetics can reduce or remove CINV in 70-80% of patients undergoing chemotherapy. Evidence-based nonpharmacological interventions need to be implemented for oncological patients in adjunct with pharmacological interventions.^{1,5,6}
- Providing evidence-based education to patients promotes better outcomes and improve patient's experience at oncology centers. A study involving 1243 (9.6%) out of 13,351 Oncology Certified Nurses surveyed about the education they provided to patients. The education they provided were within ONCC (Oncology Nursing Certification Corporation) guidelines, but nurses also provided education that lacked evidence. Thus, stressing the importance of standardization of education provided to patients.^{4,8}

Decision to Change Practice

- To promote better outcomes for patients, nurses need to be involved in evidenced-based educational programs and trainings on symptom management pertaining to oncology units.
- Implement appropriate teaching methods for patients to easily understand.
- Patients undergoing chemotherapy present with serious adverse effects that aren't always effectively relieved with pharmacological measures. Incorporating nonpharmacological therapeutic interventions in adjunct to pharmacological interventions could promote relief and adherence to treatment, improving quality of life in the long run.
- Polypharmacy causes negative impacts on patients and with symptom management, preventing patient from being overwhelmed can be achieved.
- Our study found no conclusive evidence of symptomatic relief with any type of adherence to medications.

Evaluation

- Using a survey measuring patient's satisfaction with the use of iPad technology among oncology patients in the intervention group to increase acceptance of iPad technologies.
- Improve management of chemotherapy induced adverse effects by 20-30% in a 3-month period.
- Antiemetics used to during chemotherapy provide little to no relief to adverse effects.
- The use of video games, yoga, music therapy, and EBP education will increase the management of chemotherapy induced nausea, vomiting, fatigue, and stress to provide relief.



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