



MEDICATION ERRORS IN CHEMOTHERAPY: HOW TO PROTECT YOURSELF AND YOUR PATIENTS

RISKS FOR STAFF

Potential risk

- Leakage of chemotherapy drugs during application (e.g. when connecting the infusion to the catheter)
- Contamination of surfaces through leakage, spilling or aerosols from container¹
- Contact with body fluids contaminated with chemotherapy drugs ²
- Leakage of chemotherapy drugs through stress cracks occurring in medical devices made of uncompatible plastic material³

Counter measure

- Use appropriate personal protective equipment^{1, 2}
- Make sure solid surfaces are cleaned correctly¹
- Use appropriate personal protective equipment^{1, 2}
- Make sure food and drinks are prepared, stored and consumed separately from sites where chemotherapy is stored, prepared or applicated¹

RISKS FOR PATIENTS

Potential risk

- Paravasation (IV catheter moves out of the vein and chemotherapy is applicated into the surrounding tissue)
- Overdosing and underdosing⁴
- Increased side-effects (uninformed patients fail to notice and communicate early signs or symptoms)^{5,6,7}
- Application of the wrong drug

Counter measure

- Use checklists and clinical double checks⁸
- Educate to enable them to play an active role in treatment and error prevention patients8,6
- Obtain patient's consent before application9, use clinical double checks8 and identify patient with two unique patient identifiers¹⁰

10 Schulmeister L, Patient misidentification in oncology care. Clinical journal of oncology nursing, 2008. 12(3).

¹ Esmail D H et al., Safe Handling Knowledge and Practices of Chemotherapy among Oncology Nurses in Erbil City. kufa Journal for Nursing sciences, 2016. 6(1): p. 84-90.

² Crickman R, Finnell D, Systematic review of control measures to reduce hazardous drug exposure for health care workers. Journal of nursing care quality, 2016. 31(2): p. 183-190.

³ Schlarb A K, Determining resistance to environmental stress cracking in luer fittings. Med Device Technol. 2002 Nov;13(9):30-4. 4 Banasser G et al., Medication Errors in Outpatient Hematology and Oncology Clinics. Pa Patient Saf Advis, 2017. 14(4).

⁵ Gilbar P J, Intrathecal chemotherapy: potential for medication error. Cancer nursing, 2014. 37(4): p. 299-309.

⁶ Christiansen A H et al., Risk factors for patient-reported errors during cancer follow-up: Results from a national survey in Denmark. Cancer epidemiology, 2017. 49: p. 38-45. 7 Car L T et al., Prioritizing medication safety in care of people with cancer: clinicians' views on main problems and solutions. Journal of global health, 2017. 7(1)

⁸ Weingart S N et al., Chemotherapy medication errors. The Lancet Oncology, 2018. 19(4): p. e191-e199. 9 LeFebvre K B, Felice T L, Nursing application of oral chemotherapy safety standards: an informal survey. Clinical journal of oncology nursing, 2016. 20(3).