EVALUATION OF THERAPY MANAGEMENT FOR PREVENTION OF CHEMOTHERAPY INDUCED NAUSEA AND VOMITING IN A CENTRALISED INTRAVENOUS COMPOUNDING FACILITY

Background and purpose

In April 2016, following the preliminary analysis and the production process validation, the Central IntraVenous Additive Services (CIVAS) has been completed and endowed of a robotic system for the compounding of non-toxic intravenous injectable drugs (IV). Nowadays, antiemetic drugs represent an essential anticancer support treatment in order to prevent nausea and vomiting induced by chemotherapy (CINV) and we thought that providing it as mini-bags ready for administration may result in a better efficiency of hospital workflow and increase in nurse time devoted to patient assistance.

The goal of this study is the evaluation of the reproducibility, the time and the dosage accuracy associated with the automated batches production of the CINV preventing IV therapy, in particular the 5HT3 inhibitors ondansetron and palonosetron.

Material and methods

According to drugs stability, CIVAS produced: 12 palonosetron batches, corresponding to 98 bags and 45 ondansetron batches, for a total of 622 bags. The average production time per bag preparation is: 3 minutes 15 seconds for palonosetron and 3 minutes 12 seconds for ondansetron. The average batch dosage accuracy is 99.3% for palonosetron and 98.5% for ondansetron.

Results

The production of IV bags of 5HT3 inhibitors can be excellently performed through the robotic system compounding since the results of batches production show a high process reproducibility, a reasonable average preparation time and an optimal accuracy. Next steps will be the inclusion within the new automated and centralized workflow of other antiemetic drugs such as corticosteroids and NK-1 antagonists, the preparation of bags containing two drugs and the measurement of key performance indicators, such as medical errors and time saved in daily nurses practice.

References and/or Acknowledgements


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