

NEW TECHNOLOGIES TO IMPROVE SAFETY IN PREPARATION AND ADMINISTRATION OF INTRAVENOUS ANTINEOPLASTIC DRUGS

Aparicio Carreño C, Fernández González B, Rodríguez de Castro B, Gándara Ande A, Martínez-Múgica Barbosa C, Tembrás Martínez S, Barbazán Vázquez J, Terroba Alonso P. Pharmacy Department. Cabueñes University Hospital. Gijón. Spain

WHAT WAS DONE?

A new computerized system was established to improve quality control and traceability in preparation and administration of intravenous antineoplastic drugs.

WHY WAS IT DONE?

To improve safety during preparation and administration of intravenous antineoplastic drugs.



HOW WAS IT DONE?

- Software currently in use was updated
- Protocols in pharmacology were adapted
- Densities of intravenous antineoplastic drugs were checked

- Maximum permissible error rates during elaboration were established.
- Weights of diluents and consumables were checked

The Aseptics Pharmacy Department was equipped with :



Barcode label printer



Barcode scanner



Precision scale



All-In-One computer

ELABORATION:

- Qualitative control was performed in the biological safety cabinet by scanning data matrix or barcodes, recording batches and expiration dates, both of the diluent and antineoplastic agents.
- A quantitative gravimetric test was also performed using weight measurement of the diluent and devices before and after adding the drug.
- When the mixture was correctly prepared a label was printed with an identifying barcode.

The Haematology and Oncology Day Treatment Unit was equipped with:



Barcode label printer (for hospital bracelets)



Portable computers



Barcode scanners

ADMINISTRATION:

- A hospital bracelet with a barcode was printed to identify each patient at their arrival to day treatment unit.
- Administration of the right bag to the right patient was ensured by scanning barcodes in day treatment unit.
- Prior to administration, double scan confirmation was made, checking patient's bracelet and treatment (label), by using barcode scanners, ensuring that each patient received the drug, at the right dose, on time and by the correct route of administration.

WHAT HAS BEEN ACHIEVED?

- All intravenous cancer therapies have been administered with double scan confirmation in day treatment unit since the new system was established (November 2019).
- This new way of processing intravenous antineoplastic drugs has been completely installed, but not all the antineoplastic treatments have been prepared with quality control.
- The whole process has also left a complete computer record of the staff, task performed, time, duration and potential incidents.



WHAT IS NEXT?

We will gradually implement quality control while processing all intravenous antineoplastic treatments.

