Dialysis fluid incidents during continuous haemofiltration

A search of the National Reporting and Learning System (NRLS) database of the NPSA has shown 20 incidents where there was failure to break the seal between the two compartments of the haemofiltration dialysis fluid bag resulting in incomplete mixing and preparation of the fluid.

There are two formats of dialysis fluid bags, one that has the bicarbonate solution in the top section of the bag and the other where the bicarbonate solution is in the bottom section of the bag. On some machines the bags hang below eye level making it difficult to see if the seal is broken between the two chambers. If the seal is not broken then the patient will receive just the bicarbonate solution or the main solution without the bicarbonate, depending on the type of bag.

Of these 20 incidents, no patient died or suffered severe harm though 2 patients incurred moderate harm and 2 low harm. The other 16 patients were classified as incurring no harm. This may have been due to regular blood gas analysis on severely ill patients.

Conclusions and Learning

- Renal Units and ITU staff should been made aware of this risk and the differences between the two types of haemofiltration fluid bags available.
- Unit procedures, including double-checking should be reviewed.
- Failure of breaking the seal should be considered in any patient where there is a sudden change in a patient’s acid-base balance.

Please submit comments, solutions, and personal experience to:

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