

Concentrate on the Concentration! Double Checking Avoids Another Potential Disaster

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The potential for inadvertent administration of wrong drug/wrong concentration of right drug as a result of drugs being packaged in ampoules of different concentration with very similar labeling has been in focus recently. We would like to share our experience in this regard.

On a recent call to A&E the anaesthetic team was presented with a polytrauma case. A foundation year 2 trainee on placement in ITU accompanied the team. Being familiar with induction drugs and short acting opioids, the responsibility of drawing these up was given to the trainee. In addition to the induction drugs, the registrar was handed an unlabelled 5ml syringe containing 2ml of a clear fluid. On enquiry, the registrar was informed that the drug was alfentanil and it had been drawn from 2 ampoules. As the registrar was familiar with an alfentanil concentration of 500mcg.ml⁻¹ (commonly used in a theatre setting), he expected to find 4mls in the syringe. On double checking, it was noticed that the ampoules from which the drug had been drawn were in fact 1ml alfentanil ampoules, however the concentration was 5mg.ml⁻¹, hence the syringe contained 10mgs of alfentanil. Administration of 10mg alfentanil could have had disastrous consequences in an already haemodynamically compromised, hypovolaemic patient with a suspected head injury. Interestingly, the 1ml ampoule is marked on the labelling as being suitable for intensive care only (Figure).

Subsequent to this incident, we appraised our departmental colleagues at our weekly meeting. In addition, we also contacted the hospital pharmacy, who arranged to investigate the case with the aim of replacing the 5mg/ml alfentanil ampoule with the 500mcg/ml alfentanil ampoule in all areas other than ITU.

Learning from the above incident, we recommend use of simple principles like careful checking of labels on ampoules for the name of the drug and its concentration particularly in a stressful and unfamiliar environment, rationalization of various concentrations of the same

drug with a view to placing them in appropriate locations where they are most appropriate and greater clarity in drug labelling.

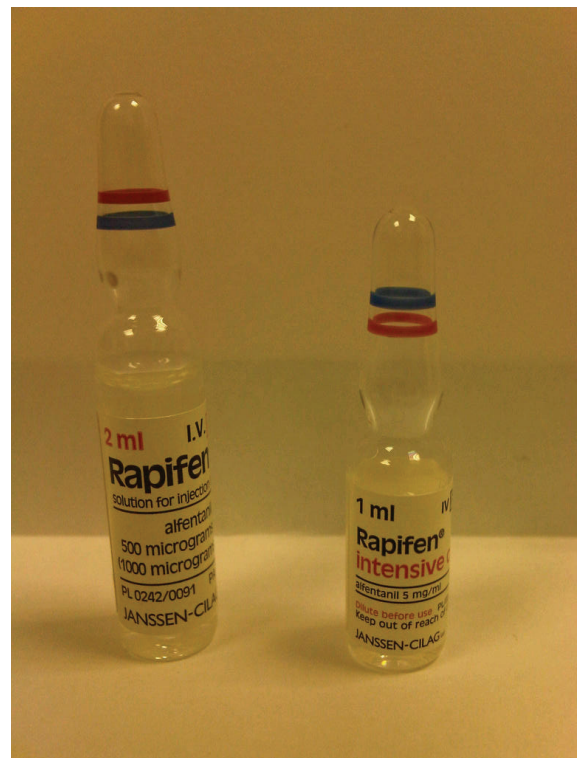


Figure 1: Alfentanil 5mg.ml⁻¹ ampoule marked for intensive care use.

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