

Screening for physicochemical incompatibilities of intravenous drugs in intensive care units: the case of monobasic potassium phosphate and furosemide

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Objectives Physicochemical incompatibilities between intravenous drugs are a recurrent problem in hospital settings. Having observed a drug precipitation during Y-site administration in our intensive care units, we undertook an investigation to find out its cause.

Methods We conducted a literature search on the injectable drugs involved in the observed precipitates and undertook laboratory physicochemical incompatibility testing of potentially incompatible drug combinations not reported in the literature.

Results Among the drugs tested, only furosemide with midazolam or with monobasic potassium phosphate was physically incompatible. The pH-dependent solubility of furosemide was the origin of the observed incompatibilities.

Conclusions Monobasic potassium phosphate is not compatible with furosemide in the concentration range used in our intensive care unit and should not be administered together in the same intravenous line. Other drug formulations buffered to a low pH should not be administered with furosemide solutions either.

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