Visual compatibility of insulin aspart with intravenous drugs frequently used in ICU

Pierre Voirol[1,2], Markoulina Berger-Gryllaki[1], André Pannatier[1,2], Philippe Eggimann[3], Farshid Sadeghipour[1,2]

[1]Service of Pharmacy, Lausanne University Hospital (CHUV), Lausanne, Switzerland
[2]School of Pharmaceutical Sciences, University of Geneva and University of Lausanne, Geneva, Switzerland
[3]Service of Intensive Care Medicine, Lausanne University Hospital (CHUV), Lausanne, Switzerland

Abstract

Objective: Insulin as continuous infusion is frequently used in critical care. Data on compatibilities are available for regular insulin but not for insulin aspart. The present study aimed at assessing the physical compatibility of insulin aspart with 47 drugs commonly used in intensive care units by simulated Y-site administration.

Methods: The physical compatibility of insulin aspart 1 IU/mL in sodium chloride 0.9% and in dextrose 5% was evaluated by visual inspection over a 24 h period. Tested drugs were diluted in the same solvents or tested without dilution, based on standard practices. Tests were conducted in duplicates.

Results: Insulin aspart was compatible over 24 h with 43 drugs over the 47 selected. Imipenem-cilastin, meropenem, esomeprazole and pantoprazole were compatible over a shorter period.

Conclusions: Of the 47 drugs tested, only four were not physically compatible over 24 h. Our data will allow a switch from regular insulin to insulin aspart if needed.

Published in : Eur J Hosp Pharm (2014) doi: 10.1136/ejhpharm-2014-000478
Contact: pierre.voirol@chuv.ch