This review provides new reliable evidence about the physicochemical stability of drugs commonly used in the critical care setting” Castells Lao et al (2018).

Abstract:

OBJECTIVES: To gather all published information about the stability of drugs commonly used in Intensive Care Units (ICU); evaluate the methodology of published data; and generate a compatibility table.

DESIGN: i) A systematic review was conducted searching the following databases: Medline, Stabilis, Handbook of Injectable Drugs and Micromedex. Articles published from 1990 to 2017 in English, Spanish and French were included. ii) Article quality was analyzed according to the stability studies practice guidelines. iii) A compatibility table was produced with data for 44 binary combinations of drugs frequently used in the ICU.

SCOPE: Spanish and international hospital ICU.

RESULTS: The systematic review included 29 studies (27 originals, 2 reviews). None of the included studies followed all the methodological requirements. However, 93% guaranteed correct reproducibility. Accordingly, drug stability knowledge was available for 50.3% of the studied admixtures, in which 77.1% of the binary combinations proved compatible and 16.8% proved incompatible.
CONCLUSIONS: This review provides new reliable evidence about the physicochemical stability of drugs commonly used in the critical care setting. The study contributes to the safe administration of intravenous drugs in critical patients with a view to avoiding adverse events in this frail population.

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