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SAFETY OF CONCURRENT INTRAVENOUS DRUG APPLICATION

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Simultaneous application of multiple intravenous pharmaceuticals, during which they come into direct contact, is common in clinical practice. This is done with both intravenous infusions and injections. While it can be practically and clinically justified, this practice can only be safe for patients if all the combined products are mutually compatible. Physical and chemical incompatibility, with precipitation being the most common and important phenomenon, presents a possible health risk. Intravenous drugs and simple intravenous liquids both have the potential for displaying incompatibility. Over time, many studies utilizing various analytical methods have uncovered numerous inadequate combinations. However, the methodology of these studies is very heterogeneous; it is not always clear whether the results are clinically relevant, and many combinations have not been tested yet. It has also been shown that healthcare providers who are involved in therapy management sometimes do not possess enough knowledge about drug compatibility, although this can be improved with appropriate interventions. Furthermore, a precisely defined protocol for compatibility studies could aid interpretation and comparison of future research data. On the other hand, easily accessible databases and knowledge of alternative application methods for therapy could prevent incompatibilities in everyday work.

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