Over the past 40 years, numerous actions have been undertaken to decrease the contamination of hospital facilities by intravenous conventional antineoplastic drugs (ICADs) such as centralizing compounding in pharmacies, using personal protective equipment, specific compounding, or infusion devices” Simon et al (2019).

Abstract:

OBJECTIVES: Over the past 40 years, numerous actions have been undertaken to decrease the contamination of hospital facilities by intravenous conventional antineoplastic drugs (ICADs) such as centralizing compounding in pharmacies, using personal protective equipment, specific compounding, or infusion devices. As recently proposed in the monograph, an additional specific decontamination step must be envisaged. A recent literature review analysed and discussed the different solutions tested in terms of decontamination efficacy. This article aims to discuss the performance of these solutions in the framework of aseptic compounding.

METHODS: The same dataset used in the previous literature review was reanalysed according to other parameters so as to select decontamination solutions: overall decontamination efficiency (EffQ), tested contaminants, and the risks of use in daily practice.

RESULTS: Using an EffQ threshold of 90% resulted in discarding 26 out of the 59 solutions.
Solutions were tested differently: 8 on 1 contaminant, 11 on 2 contaminants, and 14 solutions on between 3 and 11 contaminants. Three risks were identified to help make choices in routine practice: the mutagenicity of degradation products, the safety of operators and facilities, and respect for the aseptic environment.

CONCLUSIONS: From the results, performance is discussed according to specific situations: a one-time incident or the basic chemical contamination due to daily practice. Accordingly, the decontamination solution selected then required a risk analysis and an evaluation before implementing it in the daily practice of a compounding unit.

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