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A meta-analysis of sodium profiling techniques and the impact on intradialytic hypotension

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Hemodialysis has improved in recent years; however, despite such improvements, intra-dialytic hypotensive episodes still persist which can lead to a reduction in the overall effectiveness of the treatment. Profiling sodium levels during dialysis can improve vascular refilling and therefore may prevent hypotensive events. A number of profiling methods exist and this meta-analysis is set out to examine the effectiveness of these methods. A review and meta-analysis analytical framework was used to assess the effectiveness of hemodialysis sodium profiling techniques. Stata 11.2 (Stata Corp) was used to analyze the data. Actual numbers of hypotensive events were pooled between studies. Analysis of subgroups was performed on sodium profile type. The data were further investigated using meta-regression. Publication bias was also tested. Stepwise profiling was shown to be statistically significantly effective in reducing intradialytic hypotensive episodes. Results demonstrated that linear sodium profiling was not effective in reducing hypotensive events during dialysis. This review has shown that using stepwise profiling is more effective at reducing intra-dialytic symptoms than other profiling methods. There was no evidence that linear profiling method was any more effective than conventional dialysis and in fact the results showed the reverse.

Biography

Nina Dunne obtained a scholarship to undertake a PhD from The University of Manchester, UK. Her research focus is centered on Pediatric Dialysis. She is currently a Senior Lecturer in Child Health at The University of Brighton, UK.

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