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P135 -Outcome measures for technique failure reported in peritoneal dialysis: a methodological systematic review

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Background

Peritoneal dialysis technique failure has been identified as a core outcome by the Standardised Outcomes in Nephrology - Peritoneal Dialysis (SONG-PD) initiative to be reported in trials. However, the definition and measures used for technique failure are not standardised. We aimed to assess the scope and consistency of definitions and measures used for technique failure in trials in patients on peritoneal dialysis.

Method

MEDLINE, Embase and CENTRAL databases were searched for randomised trials conducted in patients on PD that reported technique failure as an outcome up until July 2018. The definition and measures used were extracted and independently assessed by two reviewers.

Results

From 23 included trials, 10 included definitions of technique failure. The minimum duration of HD required to define technique failure was reported in 6 (26%) trials, with “30 days” specified in 2 studies. Two studies defined technique failure as “permanent” without further definition, one defined it as continuing HD until censoring and one used any duration of HD. Death was included as a cause of technique failure in 9 studies, transplantation in one study, and recovery of kidney function in one study. No studies reported whether technique failure was planned or unplanned. Causes for technique failure were reported in 13 studies but with 8 different categorisations and 10 studies did not comment on these.

Follow up ranged from 3 months to 6 years, one study did not report length of follow up. 20 reported technique failure frequency. Yearly technique failure rates ranged from 1.1% to 22% in 18 studies with over 6 months follow up. One study with 3 months follow up had a yearly technique failure rate of 60%. In those which included death as technique failure (6 studies with data for technique failure), the range was 2.3-21%.

Conclusion

There is substantial heterogeneity in how peritoneal dialysis technique failure is defined, likely contributing to substantial variability in reported rates. Standardised measures for reporting technique failure in peritoneal dialysis trials are required.