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RANDOMISED CONTROLLED TRIALS IN PERIPHERAL VASCULAR ACCESS CATHETERS: A SCOPING REVIEW

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Introduction:

Most patients require at least one peripheral vascular device during their hospital stay. Despite available best practice guidelines, the rate of complications and failure of these devices remains high, suggesting that more research is needed.

Objectives:

We conducted a scoping review to identify which peripheral vascular device topics have been the focus of research, and to identify areas needing more research.

Methods:

We searched Pubmed, Cochrane Central Register of Controlled Trials, and CINAHL between 1 January 2005 and 30 June 2015 for randomised controlled trials involving peripheral vascular catheters.

Results:

The final review included 128 randomised controlled trials (94 peripheral intravenous catheters, 2 midline catheters, and 32 arterial catheters). Catheter insertion strategies and analgesia methods have been comprehensively studied. However, we found a lack of research addressing post-insertion care and maintenance, including dressings and securement, flushing practices and infection prevention strategies, such as skin preparation and hub decontamination.

Conclusions:

There is insufficient evidence to guide practice in many areas of peripheral vascular device care. This is likely to be contributing to the high catheter failure rates reported in the literature. More randomised controlled trials investigating strategies for reducing catheter failure and preventing infection are needed. This scoping review will enable clinicians and researchers to identify the gaps in evidence and prioritise areas needing further research.