

“In the current study a new safety IV catheter equipped with a blood leakage control septum was assessed under routine clinical conditions” Haeseler et al (2015).

Reference:

Haeseler, G., Hildebrand, M. and Fritscher, J. (2015) Efficacy and ease of use of an intravenous catheter designed to prevent blood leakage: a prospective observational trial. The Journal of Vascular Access. January 27th, .

Preventing blood exposure during IV catheter placement due to blood leakage
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Abstract:

Purpose: Conventional safety intravenous (IV) catheters prevent blood exposure during catheter placement but blood leakage from the unconnected catheter still frequently occurs. In the current study a new safety IV catheter equipped with a blood leakage control septum was assessed under routine clinical conditions.

Methods: This prospective observational trial was conducted at the KKRN (Katholisches Klinikum Ruhrgebiet Nord), Germany, September/October 2012. Peripheral IV access was established in presurgical patients using either the investigational (“IS3”) or a conventional safety IV catheter (“IS”). Incidence of blood leakage during placement and subsequent (dis-)connection procedures, duration of placement as well as handling conditions were compared.

Results: A total of 200 IV accesses were established ($n(\text{IS3}) = 102$ and $n(\text{IS}) = 98$). Blood leakage during catheter placement (4.9% (IS3) vs. 61.2% (IS); $p < 0.001$) and blood contaminations (3.9% (IS3) vs. 14.3% (IS); $p = 0.01$) were significantly reduced for IS3. All blood leakages observed with IS3 were due to improper technique. No blood leakage occurred during repeated (dis-)connections of IS3 (blood leakage IS: 74%). Using IS3, vein compression was not required (no compression: 98%) and duration of catheter placement was significantly shorter ($t(\text{IS3}) = 69.6 \pm 22.4$ s vs. $t(\text{IS}) = 85.2 \pm 28.2$ s; $p < 0.001$).

Conclusions: The investigational IV catheter effectively prevented blood leakage, thereby reducing contamination risk and workload associated with cleaning. Omission of vein compression facilitated and shortened IV catheter placement.



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Full Text

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