

Implementation of securing central venous catheter using cynoacrylate glue in ICU

K. Strunge¹, N. Dey¹, B. Husted¹ L. Blom¹. 1 Regionshospitalet Gødstrup, Denmark

Introduction

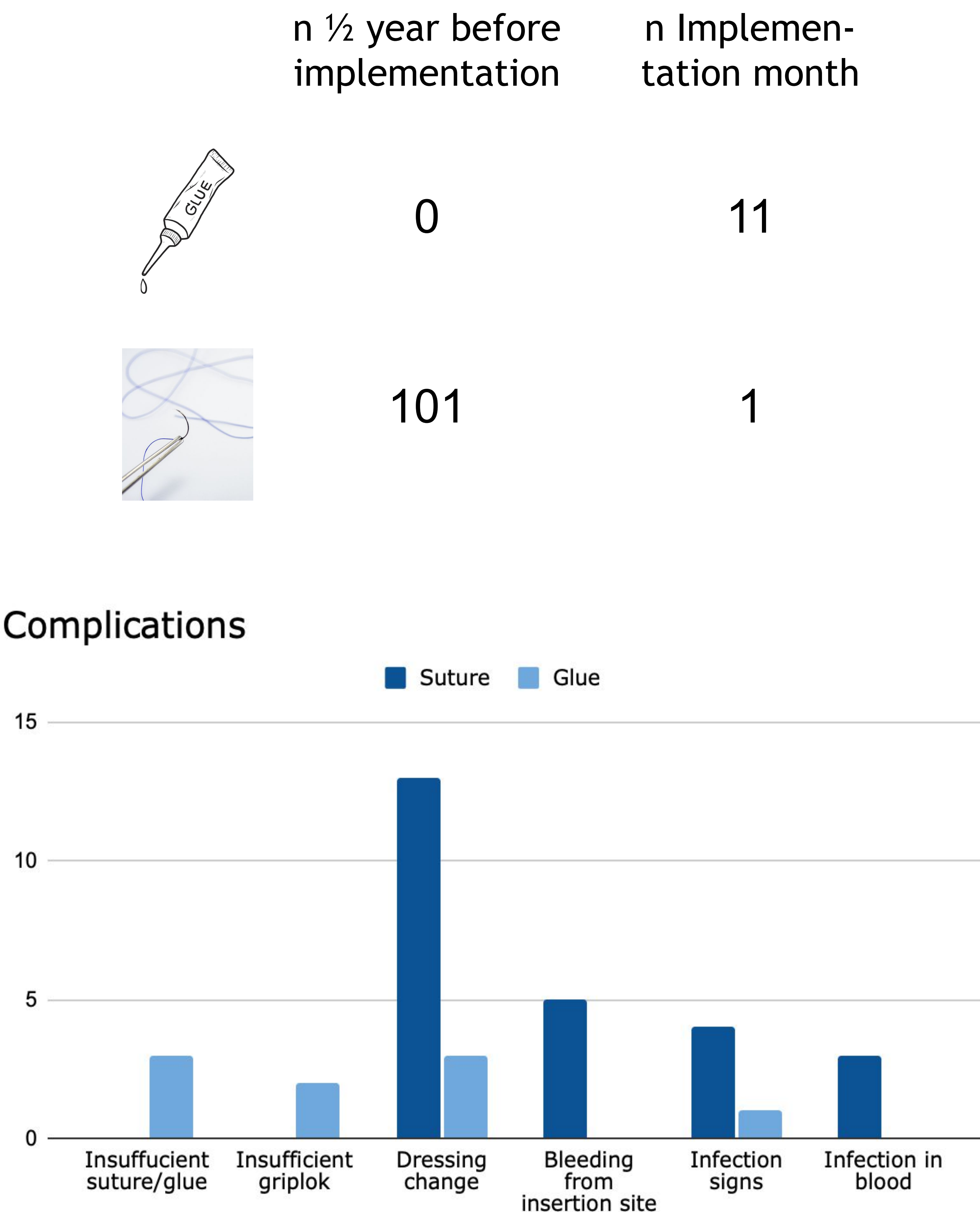
At the Intensive Care Unit (ICU) Region Hospital Gødstrup sutures are used to secure central venous catheters (CVC). Evidence suggests that glue securement creates an insertion site barrier, reducing risk of:

- Bleeding
- Infections
- Frequent dressing changes

The purpose of this study was to examine whether securing CVCs with glue (cyanoacrylate) can be implemented and compare the complications between the standard suture secured and glue secured CVCs. The comparison will focus on efficacy of the securement, bleeding, need for dressing changes and infection signs.

Methods

- A team of 2 nurses and 2 physicians formulated an internal guideline document.
- All physicians and few selected nurses in ICU were given theory and hands-on training.
- CVCs inserted at ICU from November 21 to December 20, 2023, were secured with glue and an integrated securement dressing.
- The patients were followed up in 7 days from insertion.
- Retrospective data from sutured CVCs in ICU was collected from May 21 to November 20, 2023.
- Journals were reviewed for insufficient adhesive or sutures, dressing changes, and infection signs.



Results

12 physicians and 12 nurses were trained for this project. Results showed that 11/12 CVCs were secured with glue and followed up in the period of glue securement. There were 3 cases of insufficient glue, and 5 cases of bleeding from insertion site in suture group. Infection and dressing changes were seen in both groups.

Conclusion

Implementation of glue securement of CVCs in the ICU is easy if effective training is imparted in small, dedicated group. Due to small patient population and short study period, definite conclusions cannot be achieved. Securing CVC with glue may be promising and further studies are needed.

References

1. Prachanpanich N. et al., 2021: Effectiveness of securing central venous catheters with topical tissue adhesive in patients undergoing cardiac surgery: a randomized controlled pilot study
2. Pittiruti M. et al., 2022: Ten years of clinical experience with cyanoacrylate glue for venous access in a 1300-bed university hospital