Practice Guidelines for Central Vascular Access 2020 – American Society of Anesthesiologists

LINK: https://pubs.asahq.org/anesthesiology/article/132/1/8/108838/Practice-Guidelines-for-Central-Venous-Access

ASA Guideline Data Pool: This meta-analysis included 258 pre-2011 studies from the previously updated CDC and ASA guidelines, resulting in 542 total credible articles accepted as evidence for the following catheter recommendations.

- American Society of Anesthesiologists Task Force for Vascular Access recommends the use of antimicrobial catheters including Silver/Platinum/Carbon catheters.
    - Unlike the 2011 CDC Guidelines, the 2020 ASA Guidelines are based on data published to date, and data specific to the Vantex antimicrobial catheter.
    - Current CDC guidelines and their recommendations only include data published prior to 2006. The CDC Guidelines from 2011 introduce no new data supporting the efficacy of a catheter alone as an intervention for CLABSI reduction or prevention.
    - Over half of the 2020 ASA Practice Guideline studies were published after 2011 when CDC guidelines were updated based on new data published to date, recommending a holistic and comprehensive strategy to prevent and reduce CLABSI as opposed to highlighting the efficacy of a catheter alone.
        - Supporting Evidence: In a quality-improvement study assessing 3,079 patients over 31,445 catheter day's authors were able to demonstrate that moving away from chlorhexidine/silver sulfadiazine catheters and implementing education, Vantex CVCs, sterile barrier kits, and CHG prep has the ability to reduce CLABSI rates by as much as 89.3%. *Study available upon request.* ***Reduction timeline below*
- The American Society of Anesthesiologists point out that Silver/Platinum/Carbon catheters reduce the risk of catheter-related bloodstream infection when compared to uncoated catheters.
- The American Society of Anesthesiologists point out that chlorhexidine and silver sulfadiazine catheters ONLY reduce catheter colonization, but do not reduce catheter-related blood stream infection when compared to uncoated catheters.

Stocco Meta-Analysis

LINK: https://pubmed.ncbi.nlm.nih.gov/27508901/

- Systemic review with meta-analysis of over 1,235 studies
- Evaluates the effectiveness and safety in using the second-generation CVCs that are impregnated with chlorhexidine and silver sulfadiazine when compared with other catheters. The effectiveness in bloodstream infection prevention was evaluated.
- There was no statistical significance between chlorhexidine and silver sulfadiazine impregnated catheters vs. non-impregnated catheters when it comes catheter-related bloodstream infections (Stocco et al., 2016).

*****Reduction Timeline Referenced above:***