E3-7: Care of Central Venous Access Devices: A Pilot Study of Oncology Nurses’ Troubleshooting Techniques

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Abstract:
Introduction: The purpose is to pilot test an investigator-developed questionnaire for exploring the use and perceived effectiveness of techniques reported by experienced oncology nurses for troubleshooting an occluded central venous access device (CVAD) and determine the feasibility
of electronic administration of the survey. The research questions are: what troubleshooting techniques are used for clearing an occluded CVAD and what is the perceived effectiveness of CVAD troubleshooting techniques used? Rationale includes that venous access is imperative for cancer patients and CVADs fill the need for long-term access. Occlusion is a major CVAD complication. Studies of troubleshooting techniques used by nurses who encounter occluded CVADs were not found in the literature.

**Method(s):** A descriptive exploratory design was used with a convenience sample of 127 nurses in an oncology setting. The Central Venous Access Device: Troubleshooting Techniques Questionnaire (CVAD: TTQ), a 44-item questionnaire with practice-related items, effectiveness items, demographic and usability questions, was used. Text boxes allowed for additional techniques. Nurses received letters containing a link and password to the survey on the Center’s intranet. To answer the research questions, counts and percentages were calculated and frequency tables created. Descriptive analysis of demographic and usability features was completed.

**Results:** All nurses (n = 26) reported using: ask patients to take deep breaths; ask patient to raise and or move arm; ask patient to sit up; and instill a thrombolytic agent. Respondents consider instill a thrombolytic agent as the most effective technique with the following non-invasive techniques ranked as the next 3 for effectiveness: ask patient to lie down; ask patient to take deep breath; ask patient to cough. No usability issues were reported.

**Discussion & Conclusions:** This study established that the CVAD: TTQ items are appropriate and that nurses use and find effective non-invasive techniques. Electronic administration of the CVAD: TTQ is feasible. These findings were preparatory to a current national survey of oncology nurses, our next step in development of an evidence-based approach to troubleshooting occluded CVADs.

**Abstract History:**
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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