

**Early Ambulation of Patients with Post Transfemoral Arteriography with Vascular Closure Device (VCD): A Quality Improvement Project**

Primary Investigator: Ashley Greene RN CPAN

Johns Hopkins Hospital, Baltimore, Maryland

Co-Investigators: Kristy Womack BSN RN CPAN, Marifi Castello BSN RN CAPA

**Introduction:** Post Transfemoral Arteriogram (PTFA) is a minimally invasive diagnostic interventional procedure using venous closure device (VCD) to achieve hemostasis. Post procedure patient discomfort arises due to restrictions in position and prolonged bedrest. The postanesthesia care unit (PACU) nurses conducted an evidence-based practice (EBP) project that recommended early ambulation for PTFA with VCD between May 1, 2021 and December 1, 2021.

**Identification of the problem:** IR PACU patients' 120 minute supine positioning and 180 minute total bedrest time causes patient discomfort and PACU to go on hold – not allowing the operating room patients to be transferred.

**QI question/Purpose of the study:** Can supine positioning be reduced from 120 minutes to 60 minutes and total bedrest time be reduced from 180 minutes to 120 minutes without incidence of bleeding or trauma after PTFA with VCD?

**Methods:** This project compared current practice of IR patients that requires three-hour bedrest while maintaining supine head of bed (HOB) in flat position for two hours then elevating the HOB to 30 degrees for one additional hour vs implementing two-hour bedrest while maintaining supine HOB in flat position for one hour then elevating the HOB to 30 degrees for an additional hour. Data collection involved monitoring BP, HR, RR, femoral pulse check, femoral groin site check, pain score and patient satisfaction.

**Outcomes/Results:** Data showed reducing the total supination time from 120 minutes to 69.95 minutes and total bedrest time from 180 minutes to 108 minutes showed no increased risk for bleeding or trauma in the patient and overwhelmingly increased patient satisfaction related to decrease in back discomfort while supine and ability to void out-of-bed and/or without assistive devices.

**Discussion:** Cardiac Prep/PACU nurses recover interventional cardiac patients with the early ambulation protocol for one hour and progressively elevate HOB every thirty minutes. These patients safely ambulate after two hours. Further evaluation of this protocol could be cost effective due to decreased utilization of resources, manpower, and length of hospital stay.

**Conclusion:** PTFA with VCD patients can safely reduce their flat bedrest and ambulation time frames by one hour after PTFA with VCD.

**Implications for perianesthesia nurses and future research:** The science revealed ten years of research recommending safe ambulation within 120 minutes PTFA with VCD. Dissemination of these findings will advance the IR recovery process and improve patient satisfaction.