

Sequential Compression Device Utilization: A Quality Multi-Institution Review

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Categories: Trauma, General Surgery

Keywords: sequential compression, sequential compression device utilization, intermittent pneumatic compression, general and abdominal-pelvic surgery

How to cite this poster

Kelli M, Ramos T, Burns B (2018) Sequential Compression Device Utilization: A Quality Multi-Institution Review. Cureus 10(2): e.

Abstract

The American College of Chest Physicians recommends intermittent pneumatic compression devices (ICDs) for general and abdominal-pelvic surgery patients and those at high risk of thrombosis. The East Tennessee State University (ETSU) surgery residency covers three hospital systems. The ETSU residents did a quality review study to examine compliance with this important measure.

Open Access

Published 02/10/2018

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Sequential Compression Device Utilization: A Quality Multi-Institution Review



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Introduction

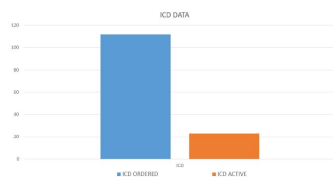
Intermittent pneumatic compression (IPC) works by sequential inflating and deflating, to establish an intermittent gradient of pressure to increase blood flow, prevent stasis, activate the endogenous fibrinolytic pathway and stimulate the vascular endothelial cells. Research has shown increased fibrinolysis, tissue factor pathway inhibitor and plasminogen activator pathway within 2 hrs of utilizing IPC.

Abstract

The American College of Chest Physicians recommends intermittent pneumatic compression devices (ICDs) for general and abdominal-pelvic surgery patients and those at high risk of thrombosis. The East Tennessee State University (ETSU) surgery residency covers three hospital systems. The ETSU residents did a quality review study to examine compliance with this important measure.

Methods

An observational study was completed by ETSU residents, on general surgery services at three different institutions. During morning rounds on days chosen at random, surgery residents, were asked to observe the number of patients that had their ICDs on and functional. The study population was all surgery patients with ICDs orders. Patients ambulating and with no ICDs orders were excluded.



Results

Of the 112 patients observed, 23 had their ICDs on and functional. Two patients were excluded as they were walking. The study was conducted over the course of 7 (non-sequential) days. All three institutions generated about the same average. About 20% of patients had their ICDs on and functional despite orders.

Discussion

Despite the ACCP guidelines and active IPC orders on admission, about 20% of patients at 3 different institutions on general surgery services, were observed wearing their ICDs. While mechanical thromboprophylaxis is proven to be effective and safe, a major challenge we observed during our study was compliance. Our plan is to use our data to implement educational programs for health care providers to maximize compliance and enhance outcome.

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