



Intravenous literature: Hughes, M.E. (2011) PICC-Related Thrombosis: Pathophysiology, Incidence, Morbidity and the Effect of Ultrasound-Guided Placement Technique on Occurrence in Cancer Patients. *Journal of the Association for Vascular Access*. 16(1), p.8-18.

Abstract:

Aim: To examine the phenomenon of catheter-related thrombosis by describing the pathophysiology of thrombosis and reviewing the evidence relating to the incidence, morbidity and the use of ultrasound-guided placement on the reduction in occurrence.

Background: The use of peripherally inserted central catheters (PICCs) as a means to deliver essential therapy for patients is common practice within the field of Oncology. The functional capacity of these devices has to be balanced with the potential for the development of complications such as thrombosis which may lead to debilitating physical or psychological effects.

Methods: Papers of all methodological design were included in the English language from 1980-2009. A review of the literature included papers associated with; the incidence of PICC-related upper extremity deep vein thrombosis (UEDVT), the morbidity and mortality associated with central venous catheter-related UEDVT and the use of ultrasound guidance to place PICCs.

Results: The literature demonstrates that catheter-related thrombosis is not an uncommon

event especially when cancer patients are under investigation. The evidence relating to the use of ultrasound-guided placement as a means to reduce the incidence of thrombosis specifically in PICCs is small in respect to the number of papers but demonstrates a clear reduction in occurrence.

Conclusion: The development of co-morbidities of thrombosis such as pulmonary embolus or post-thrombotic syndrome exacerbates the disease process and is demonstrated to result in the deterioration of health and untimely death. The use of ultrasound devices to place PICCs needs to be considered in the clinical environment based on early indication from the literature that placement in the upper arm leads to a reduction in the incidence of catheter-related thrombosis.

