HealthManagement.org
Promoting Management and Leadership

Commonly Used Catheters Double Risk of Blood Clots in ICU and Cancer Patients

Touted for safety, ease and patient convenience, peripherally inserted central catheters have become many clinicians' go-to for IV delivery of antibiotics, nutrition, chemotherapy, and other medications.

But compared to other central venous catheters (CVCs), these commonly-used catheters (known as PICCs) more than double the risk of dangerous blood clots – especially among patients who are critically ill or who have cancer, according to a new University of Michigan Health System (UMHS) study published in *The Lancet.*

In recent years, PICCs have become the preferred device through which to administer long-term intravenous fluids, antibiotics and other drugs because they have lower risks of infection, can be conveniently placed at the bedside, and can stay in place for long periods of time. PICCs are also safer to insert, typically placed in the arm, while CVCs are placed into a large vein in the neck, chest or groin and risk damage to nerves or arteries. The ability to keep PICCs in for weeks or even months also allows patients who need a constant flow of medications to go home with these catheters.

"Peripherally inserted central catheters have ushered in a new era of care and certainly the benefits of these devices are significant – but health providers should also be aware that they are not without their own risks and may not be appropriate for every patient," says lead author Vineet Chopra, a hospitalist at UMHS and assistant professor of internal medicine.

"We've gravitated towards using this device over central venous catheters for good reasons, and it may still be the best choice for some people. However, our findings suggest that patients and physicians should carefully review the risks and benefits when it comes to placing PICCs, especially with respect to blood clots. Our study shows that this risk may be higher than previously recognized and suggests that there is no one-size-fits-all approach when considering use of these devices."

Researchers specifically analyzed the risks of deep vein thrombosis – blood clots that form in the vein deep in the body – associated with PICCs relative to CVCs. Patients who received PICCs were more than twice as likely to develop blood clots as those who received CVCs. The frequency of PICC- associated deep vein thrombosis was greatest in patients in the ICU or those with cancer, populations already at high risk of clotting.

PICC-associated deep vein thrombosis is a potentially life-threatening condition that can lead to arm pain, arm swelling, venous damage, lung blood clots and possibly death. The rate of hospitalization for venous thromboembolism continues to climb in the U.S., with more than 330,000 hospital admissions for this condition a year.

© For personal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu.

“The paradox is the populations with the highest risks from this type of catheter are the ones who need them and use them the most,” says senior author Scott Flanders, M.D., M.H.M. professor of internal medicine and director of hospital medicine at the University of Michigan. “Our findings suggest that the risks of developing blood clots from PICCs may be higher than most clinicians would suspect. We clearly need to explore alternatives that may be safer and ways to prevent these clots in high-risk patients whose care requires this type of device.”

Additional Authors: Sarah Anand, M.D.; Andy Hickner MSI, Michael Buist BA, Mary A.M. Rogers, Ph.D., M.S. all of U-M.

Reference:

“Risk of venous thromboembolism associated with peripherally inserted central catheters: a systematic review and meta-analysis,” The Lancet, published online, May 20, 2013, http://dx.doi.org/10.1016/S0140-6736(13)60592-9

Source: University of Michigan Health System

Published on : Tue, 21 May 2013

© For personal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu.