

## **To investigate the association between ABO blood group and venous thrombosis (VT) risk in patients with peripherally inserted central catheters (PICC)” Koo et al (2017).**

Abstract:

**OBJECTIVE:** To investigate the association between ABO blood group and venous thrombosis (VT) risk in patients with peripherally inserted central catheters (PICC).

**METHODS:** Single centre retrospective cohort study. A cohort of patients who underwent PICC insertion from September 2010 to August 2014 were followed up for symptomatic VT presentations diagnosed by ultrasound. Blood group status was identified from hospital information systems.

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**RESULTS:** 2270 participants had 3020 PICCs inserted. There were 124 cases of symptomatic venous thrombosis, an incident rate of 4% (95% CI 3%-5%). Univariate analysis adjusting for the clustered sample showed that having chemotherapy, two or more previous PICC, a larger catheter size, a diagnosis of cancer and having a blood group B were all associated with an increased risk of a VT. In the multivariate analysis, PICC diameter, cancer diagnosis and blood group B were all independently associated with increased risk of VT.

**CONCLUSION:** Patients undergoing PICC insertion with a blood group B appear to have higher risk of VT, independent of risks attached to the PICC procedure and cancer diagnosis. Without any existing guidelines for PICC related VT, this investigation creates a platform for further research to be conducted in order to establish guidelines. Advances in knowledge: Previous studies investigating VT risk associated with blood group status related to large heterogeneous populations. In this article, we look at patients specifically with PICC, which reduces the heterogeneity in the cohort. In addition, due to the substantial number of patients enrolled, we had a chance to perform multivariate analyses with

statistical significance.

Reference:

Koo, C.M., Vissapragada, R., Sharp, R., Nguyen, P., Ung, T., Solanki, C. and Esterman, A. (2017) ABO blood group related venous thrombosis risk in patients with peripherally inserted central catheters. The British Journal of Radiology. November 10th. .

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