In this large cohort, younger patients and those with more advanced stage breast cancer were more associated with catheter-tip-related thrombus after port placement" Makary et al (2018).

Abstract:

Purpose: Catheter-tip associated thrombosis is not uncommon in patients with implantable central venous ports; however, the prevalence and clinical impact of this complication on patient management is unclear. This study aims to identify risk factors for thrombus formation in a large population receiving serial echocardiograms (echo) following port placement.

Methods: A total of 396 female breast cancer patients underwent internal jugular vein chest port placement between 2007 and 2013 and received echo studies every third month. Catheter tip position was measured from chest radiography and catheter associated thrombus was identified by echo.

Results: Sixteen out of 396 patients (4%) had catheter-tip thrombus. No patients were symptomatic or prophylactically anticoagulated. Patients with thrombus were significantly younger than those without (46.4 years versus 53.4 years, respectively, $p = 0.02$) and had higher stage breast cancer with 75% versus 44.7% having stage III or IV cancer ($p = 0.017$). Thrombus was identified after a median of 91 days. No significant difference was identified in anatomic ($p = 0.1$) or measured ($p = 0.15$) tip position, port laterality ($p = 0.86$), or number of port lumens ($p = 0.65$).

Conclusions: In this large cohort, younger patients and those with more advanced stage breast cancer were more associated with catheter-tip-related thrombus after port placement.

Reference:

Makary, M.S., Lionberg, A., Khayat, M., Lustberg, M.B., AlTaani, J., Pan, X.J., Layman, R.R., Raman, S.V., Layman, R.M. and Dowell, J.D. (2018) Advanced stage breast cancer is

associated with catheter-tip thrombus formation following implantable central venous port placement. Phlebology. January 1st. .

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