We conducted a retrospective cohort study involving pediatric patients with pulmonary hypertension treated with chronic intravenous infusion of PGI2 at Boston Children’s Hospital and determined the rate (per 1,000 line-days) of various CVL-related complications” Marr et al (2015).

Reference:

Abstract:
Chronic infusion of prostacyclin (PGI2) via a Broviac central venous line (CVL) is attended by risk of CVL-related complications, but we know of only one report regarding CVL-associated bloodstream infection (BSI) with PGI2 in children and none regarding other complications. We conducted a retrospective cohort study involving pediatric patients with pulmonary hypertension treated with chronic intravenous infusion of PGI2 at Boston Children’s Hospital and determined the rate (per 1,000 line-days) of various CVL-related complications. We also determined how often complications necessitated line replacement and hospitalization, time to replacement of CVLs, and interpatient variability in the incidence of complications. From 1999 until 2014, 26 patients meeting follow-up criteria had PGI2 infusion, representing 43,855 line-days; mean follow-up was 56 months (range, 1.4-161 months). The CVL complication rates (per 1,000 line-days) were as follows: CVL-BSI, 0.25; superficial line infection, 0.48; impaired integrity, 0.59; occlusion, 0.09; and malposition, 0.32. The total complication rate was 1.73 cases per 1,000 line-days. All CVL-BSI and malposition cases were treated with CVL removal and replacement. Of CVLs with impaired integrity, 23 could be repaired and 3 required replacement. Six of 21 superficial CVL infections required replacement of the CVL. Three of 4 occluded CVLs were replaced. CVL complications occasioned 65 hospitalizations. There was marked interpatient variability in the rate of complications, much but not all of which appeared to be related to duration of CVL placement. We conclude that non-BSI complications are very significant and that efforts to teach and emphasize other aspects of line care are therefore very important.