



Neonates undergoing congenital heart surgery require central venous access for diagnostic information and medication administration. There are multiple options for central access including peripherally inserted central catheters, umbilical, central venous, and transthoracic intracardiac lines” Stein et al (2019).

Abstract:

Neonates undergoing congenital heart surgery require central venous access for diagnostic information and medication administration. There are multiple options for central access including peripherally inserted central catheters, umbilical, central venous, and transthoracic intracardiac lines. We retrospectively identified all patients younger than 30 days who underwent cardiac surgery in a 1-year period. Data were collected on demographic and medical characteristics, adverse events, pre-emptive transfusion of blood products prior to line removal, and transfusion of blood products following removal of transthoracic intracardiac lines and central venous lines. In our cohort of 124 neonates, 176 transthoracic intracardiac lines were placed in 113 patients. Eighty-two patients had pre-existing central venous access including 35 umbilical venous lines, 21 PICC lines, and 18 CVLs. Ninety-eight patients received a CVL in the operating room by anesthesia. Five patients were transfused to correct laboratory derangement prior to transthoracic intracardiac line removal. Transfusion of packed red blood cells (pRBC) occurred after transthoracic intracardiac line removal in 25 patients. Thrombus formation was present in one patient with a transthoracic

intracardiac line and three patients with CVLs. One patient underwent surgical intervention for repositioning of a transthoracic intracardiac line. There were no cases of cardiac arrest, extracorporeal life support, or deaths attributable to lines. In this cohort, transthoracic intracardiac lines were generally safe. There were very few complications of thrombus, infection, or requirement for surgical intervention; however, transfusion of pRBCs following transthoracic intracardiac line removal occurred in 20% of patients.

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Reference:

Stein, M.L., Quinonez, L.G., DiNardo, J.A. and Brown, M.L. (2019) Complications of Transthoracic Intracardiac and Central Venous Lines in Neonates Undergoing Cardiac Surgery. *Pediatric Cardiology*. January 30th. .

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