Abstract:

OBJECTIVE: To investigate Port-A-Cath (PAC)-related thrombosis and postthrombotic syndrome (PTS) in children with cancer.

STUDY DESIGN: The study population was a consecutive cohort of children diagnosed with cancer and a PAC implanted at diagnosis. Children were evaluated for the presence of PAC-related thrombosis by magnetic resonance venography and the presence of congenital prothrombotic risk factors and PTS.

RESULTS: A total of 114 children (median age, 6.04 years) were included. Of these children, 48 (42%) were treated for solid tumors and 66 (58%) were treated for hematopoietic tumors, including 38 for acute lymphoblastic leukemia. At the time of magnetic resonance venography, 42 children (37%) had the PAC still in place, and 72 (63%) had the PAC removed. Overall, PACs were in place for a total of 324.92 PAC-years. PAC-related thrombosis was detected in 45 children (39.5%) with a current or previous PAC. Of these, 21 (47%) had a solid tumor, 14 (31%) had acute lymphoblastic leukemia, and 10 (22%) had another hematopoietic tumor. Younger age at diagnosis, female sex, duration of PAC use, and left-
PAC side placement were independently associated with an increased risk of thrombosis, whereas asparaginase therapy and the presence of inherited prothrombotic risk factors were not. Mild PTS (ie, presence of prominent collateral vessels in the skin) was present in 5.6% of the children.

CONCLUSION: PAC-related thrombosis is common in pediatric oncology patients. In some children, thrombotic complications can lead to the development of PTS.