

Intracardiac thrombus in children: We are in need of and must discuss new algorithms

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Objectives: The aim of this study was to determine the risk factors and outcomes of patients with intracardiac thrombus.

Methods: The medical records of patients with intracardiac thrombus between June 2010 and December 2013 were searched thoroughly. The size, location and outcome of thrombus were assessed retrospectively. The patients given the diagnosis of infective endocarditis later on according to the cilinical and laboratory findings were excluded from the study.

Results: 16 patients were enrolled in this study. The median age of patients was 2,2 (2 days-14,1) years. Six patients were newborn and 2 patients were infant. The median size of thrombus was 9 (5-21) mm. The localization was right atrium in 7, right ventricle in 5, left ventricle in 1, pulmonary artery in 1 and superior vena cava in 2 patients. There was prematurity in 5, siyanotic congenital heart disease in 1, blood culture positivity in 3, malignancy in 4, nephrotic syndrome in 1, indwelling (umbilical or central venous) catheters in 10 and acquired or genetic thrombophilia (protein C deficiency, factor V Leiden, MTHFR A1298C and MTHFR C677T mutations) in 6 patients as risk factors. The first choice was tissue plasminogen activator in 2 patients because of the risk of embolization, classical heparin in 1 patient because of the acute nature of the thrombus, parenteral antimicrobials in 1 patient because of isolated bacteremia and low molecular weight heparin in remaining 12 patients. In 9 patients therapy included parenteral antimicrobials together with anticoagulants because systemic infection. The result was complete resolution in 15 patients and in 1 patient thrombus was surgically removed during corrective surgery for tetralogy of Fallot. The median time was 16 (2-70) days for 50% resolution and 26 (3-93) days for complete resolution. There was no anticoagulant therapy related major complication.

Conclusions: In patients with risk factors, cardiac thrombosis should be kept in mind. In patients with intracardiac thrombus, selection of anticoagulant therapy may decrease the risk of complications. Surgery is rarely required and thrombolytics are not usually necessary for resolution of thrombus.

Key words: Intracardiac thrombus, children, risk factors, treatment, new, algorithm