



Thromboembolic Complications in Pediatric Patients Underwent Fontan Operation in Srinagarind Hospital and Queen Sirikit Heart Center of the Northeast

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Background and Objective: Incidence of cyanotic congenital heart disease in children is occurred approximate 15% of congenital heart disease. Most patients with complex congenital heart lesions often undergo several cardiac surgical procedures at a young age and are at risk for significant morbidity and mortality. This study aims to review the clinical relevance of thromboembolic complications after Fontan procedure.

Method: We retrospectively reviewed all patients aged younger than 20 years with diagnosis of various cyanotic congenital heart diseases, undergoing Fontan operation between Jan 1st, 2009 to Dec 31st, 2013.

Result: A total of 18 patients (Male:female=10: 8) underwent Fontan surgery at a median age of 9.8 years (6.5-14). The incidence of thromboembolic complications occurred in 4 of 18 patients (22.2%) especially within the first postoperative year (3 in 4 events). The clinical presentations include SVC

syndrome (1), edema (1), alternation of consciousness (1) and massive ascites (1). The patients had clot at anastomosis site (3) and intracardiac thrombus (1). Ten patients received aspirin for thromboprophylaxis with no significant bleeding complications. Three of four patients with thromboembolic complications received aspirin (3) for thromboprophylaxis after Fontan operation and one did not receive anticoagulation. Two patients were treated with enoxaparin with complete thrombus resolution followed with aspirin for thromboprophylaxis and one patients was on enoxaparin with persistent stenosis of anastomosis followed with warfarin. One patient passed away from septicemia.

Conclusion: Thromboembolic complications are frequent after Fontan operation, with a peak during the first postoperative year. Thromboprophylaxis should play an important role after Fontan surgery.

Keyword: Incidence , thrombotic complications , Fontan

