

Abstrak

Latar Belakang

Blalock-Taussig *shunt* (BT-*shunt*) termodifikasi merupakan penanganan paliatif di bedah jantung anak untuk meningkatkan aliran darah ke paru pada kasus penyakit yang tergantung duktus atau yang mengalami penurunan aliran darah ke paru. Penelitian ini bertujuan untuk meneliti hubungan antara berat badan pasien, diameter *shunt* dan kadar hemoglobin terhadap terjadinya trombosis *shunt* pada pasien paska operasi BT-*shunt* termodifikasi di RSUD Dr. Soetomo, Surabaya.

Material dan Metode

Delapan puluh tiga pasien antara 2012 dan 2017 diteliti secara retrospektif. *Shunt* yang paten didefinisikan sebagai *shunt* yang terbuka sampai pasien pulang. Hubungan antara karakteristik pasien dengan terjadinya trombosis akan dihitung dengan Log Regresi dan Chi Square.

Hasil

Empat puluh tiga pasien (51%) adalah wanita. Usia median adalah 9 (rentang 1-252) bulan. Berat badan median dan hemoglobin adalah 6 (rentang 1- 68) kg dan 16.1 (rentang 9.1- 26) g/dL. Diameter *shunt* 3 mm pada 1 (1.2%) pasien, 4 mm pada 35 (42%) pasien dan 5 mm pada 46 (55%) pasien.

Trombosis *shunt* terjadi pada 3 (3.6%) pasien dan kesemuanya adalah wanita. Pasien dengan trombosis *shunt* direncanakan untuk biventrikuler.

Usia median, berat badan dan hemoglobin adalah 36 (rentang 36-142) bulan, 17 (rentang 7-22) kg dan 23.58 (rentang 19.3-24.4) g/dL. Dari semua variabel tidak ada yang menunjukkan hubungan signifikan terhadap terjadinya trombosis *shunt*: hemoglobin ($22.42 \text{ g/dL} \pm 2.73$ dengan trombosis vs $17.31 \text{ g/dL} \pm 4.04$ tanpa trombosis; $p = 0.723$) dan berat badan pasien ($15.33 \text{ kg} \pm 7.63$ dengan trombosis vs $11.56 \text{ kg} \pm 13.06$ tanpa trombosis; $p = 0.623$).

Diameter *shunt* dengan trombosis adalah 5 mm dan 4 mm pada 2 pasien dan 1 pasien. Diameter *shunt* tidak menunjukkan hubungan yang bermakna dengan terjadinya trombosis ($p = 0.723$).

Kesimpulan

Penggunaan BT-*shunt* termodifikasi di RSUD. Dr. Soetomo, Surabaya menunjukkan hasil yang baik dengan insiden trombosis yang rendah.

Kata Kunci

BT-*shunt* termodifikasi, trombosis, Indonesia

Abstract

Background

Modified Blalock-Taussig shunt (modified BT-shunt) is one of palliative heart surgery to increase pulmonary blood flow in case of children with ductal dependent or decreased pulmonary blood flow. This study aimed to review association between patient's body weight, shunt diameter and hemoglobin and incidence of shunt thrombosis in the single-centre experience

Materials and Methods

Eighty three patients between 2012 and 2017 were retrospectively reviewed. Inclusion criteria was all patient who underwent modified BT-shunt using polytetrafluoroethylene (PTFE) shunt as an initial palliative surgical treatment. Follow-up was accomplished using routine post operative echocardiography. Shunt patency was defined as an open graft until patient discharged. The association between patient characteristics and shunt thrombosis were calculated using Logistic Regression and Chi Square method.

Results

Fourty three patients (51%) were female. Median age was 9 (range 1-252) months. Median weight and hemoglobin were 6 (range 1- 68) kg and 16.1 (range 9.1- 26) g/dL. The sizes of shunt were 3 mm in 1 (1.2%) patient, 4 mm in 35 (42%) patients and 5 mm in 46 (55%) patients, respectively.

Shunt thrombosis occurred in 3 (3.6%) patients, all of them were female. All patients with shunt thrombosis were planned for future biventricular repair.

Median age, weight and hemoglobin were 36 (range 36-142) months, 17 (range 7-22) kg and 23.58 (range 19.3-24.4) g/dL, respectively. Of these variables, all did not show a statistically significant association with shunt thrombosis: hemoglobin ($22.42 \text{ g/dL} \pm 2.73$ with thrombosis versus $17.31 \text{ g/dL} \pm 4.04$ no thrombosis; $p = 0.723$) and patients weight ($15.33 \text{ kg} \pm 7.63$ with thrombosis versus $11.56 \text{ kg} \pm 13.06$ no thrombosis; $p = 0.623$).

Shunt sizes in patients with shunt thrombosis were 5 mm 2 patients and 4 in 1 patient. Shunt diameter showed no significant association with shunt thrombosis ($p = 0.723$).

Conclusions

The use of modified BT-shunt in RSUD. Dr. Soetomo, Surabaya had a good result with less incidence of thrombosis.

Keywords

modified BT-shunt, thrombosis, Indonesia