

Faktor risiko yang memengaruhi mortalitas dini Arterial Switch Operation primer pada Transposition Great Arteries Intact Ventricular Septum Late Presenter = Risk factors affecting early mortality of the Primary Arterial Switch Operation for Late Presentation of Transposition of the Great Arteries with Intact Ventricular Septum

Aflah Dhea Bariz Yasta, author

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Abstrak

Latar belakang: Basis data bagian Bedah Jantung Anak RSPJNHK menunjukkan terdapat 133 pasien TGA IVS yang dilakukan ASO primer. Terdapat mortalitas tinggi yaitu 9% dibandingkan dengan mortalitas yang pernah dilaporkan sebelumnya yaitu 5%. Telah banyak penelitian yang memperlihatkan faktor risiko yang memengaruhi keluaran ASO primer pada TGA IVS late presenter, tetapi belum terdapat penelitian yang melaporkan keluaran prosedur tersebut di Indonesia. Jumlah kasus yang banyak di Indonesia dan tingkat mortalitas operasi yang masih tinggi menjadi alasan untuk mencari faktor risiko yang memengaruhi keluaran tersebut. Metode: Penelitian ini adalah penelitian kohort retrospektif yang melibatkan pasien TGA-IVS late presenter yang menjalani ASO primer pada tahun 2015-2022 di Rumah Sakit Pusat Jantung Nasional Harapan Kita (RSPJNHK). Variabel yang dinilai meliputi faktor praoperasi seperti usia, indeks massa ventrikel kiri, diameter dinding posterior ventrikel kiri serta faktor intraoperasi seperti lama penggunaan CPB dan klem silang aorta. Analisis bivariat dan multivariat dilakukan untuk menilai hubungan faktor risiko tersebut dengan kejadian mortalitas dini. adjusted Odds Ratio (aOR) dinilai untuk mengidentifikasi seberapa besar pengaruh faktor risiko tersebut apabila faktor lain disamakan (adjusted) Hasil: Terdapat 88 subjek yang diikutsertakan dalam penelitian ini. Median usia subjek adalah 7,2 (4-365) minggu. Kejadian morbiditas dini dialami oleh 11,7% subjek. Indeks massa ventrikel kiri merupakan faktor risiko independen yang memengaruhi keluaran mortalitas dini pasien TGA IVS late presenter yang menjalani ASO primer dengan nilai $p = 0,003$ serta aOR 14,02 (2,4-83,8). Lama penggunaan klem silang aorta dan mesin CPB memengaruhi keluaran mortalitas dini dengan nilai $p 0,035$ dan $0,011$. Usia dan diameter dinding posterior ventrikel kiri tidak memengaruhi keluaran mortalitas dini pasien TGA IVS late presenter yang menjalani ASO primer. Kesimpulan: Indeks massa ventrikel kiri merupakan faktor independen yang memengaruhi mortalitas dini pada pasien TGA-IVS late presenter yang dilakukan ASO primer. Sedangkan lama penggunaan klem silang aorta dan lama penggunaan mesin CPB menjadi faktor risiko yang memengaruhi mortalitas dini untuk ASO primer pada Transposition Great Arteries–Intact Ventricular Septum late presenter.

.....Background: The Pediatric Cardiac Surgery database of RSPJNHK showed that there were 133 TGA-IVS patients who underwent primary ASO. There was a high mortality rate of 9% compared to the previously reported mortality rate of 5%. There have been many studies showing risk factors affecting the outcome of primary ASO in TGA IVS late presenters, but there are no studies reporting the outcomes of the procedure in Indonesia. The large number of cases in Indonesia and the high operative mortality rate are the reasons to search for risk factors affecting the outcomes. Methods: This study was a retrospective cohort study involving the Primary Arterial Switch Operation for Late Presentation of Transposition of the Great Arteries With Intact Ventricular Septum between 2015 and 2022 at Harapan Kita National Heart Center

Hospital (RSPJNHK). The variables assessed included preoperative factors such as age, left ventricular mass index, and left ventricular posterior wall diameter, and intraoperative factors like the duration of CPB use and aortic cross-clamp time. Bivariate and multivariate analyses were conducted to evaluate the association of these risk factors with the incidence of early mortality. The adjusted Odds Ratio (aOR) was calculated to determine the extent of influence these risk factors had when other variables were controlled for. Results: A total of 88 subjects were included in this study. The median age of the subjects was 7.2 (4-365) weeks. Early morbidity events were experienced by 11.7% of subjects. Left ventricular mass index was an independent risk factor affecting early mortality outcomes of late presenter TGA IVS patients undergoing primary ASO with a p value = 0.003 and aOR 14.02 (2.4-83.8). Length of use of aortic cross clamp and CPB machine influenced early mortality outcomes with p values of 0.035 and 0.011. Age and left ventricular posterior wall diameter did not affect early mortality outcomes of late presenter TGA IVS patients undergoing primary ASO. Conclusion: Left ventricular mass index, is an independent risk factor that affect early mortality of patient with TGA-IVS late presenter underwent primary ASO. While duration of aortic cross clamp use, and duration of CPB machine use are risk factors that affect early mortality of the Primary Arterial Switch Operation for Late Presentation of Transposition of the Great Arteries With Intact Ventricular Septum.