Hubungan tingkat aktifitas fisik dengan kadar P selectin 3 bulan pasca komisurotomi mitral transvena perkutan pada stenosis mitral rematik = Relationship between physical activity levels with P selectin levels in rheumatic mitral stenosis patients 3 months after percutaneus transvenous mitral commissurotomy

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Abstrak

[ABSTRAK
Latar belakang : Stenosis mitral (SM) masih merupakan masalah kesehatan yang penting di Indonesia. Pada SM terjadi peningkatan kadar P selectin karena disfungsi endotel dan aktivasi platelet. Komisurotomi mitral transvena perkutan (KMTP) merupakan tatalaksana baku untuk penderita SM yang dapat memperbaiki kemampuan aktivitas fisik yang pada akhirnya akan mempengaruhi kadar P selectin. Belum ada penelitian yang menghubungkan antara tingkat aktifitas fisik dengan kadar P Selectin 3 bulan pasca KMTP pada SM rematik.
Metode : Penelitian ini merupakan penelitian potong lintang. Dari 56 subyek penelitian yang menjalani KMTP sejak bulan Mei 2013 sampai Februari 2014 di Rumah Sakit Jantung dan Pembuluh Darah Harapan Kita, didapatkan 35 sampel yang memenuhi kriteria penerimaan . Data klinis dan data ekokardiografi sebelum dan 3 bulan pasca KMTP diambil dari catatan medis. Dilakukan wawancara 3 bulan pasca KMTP. Tingkat aktivitas fisik dibagi menjadi 2 kelompok: kelompok 1 1-4 METs, kelompok 2 > 4 METs. Kadar P selectin diambil 3 bulan pasca KMTP. Selanjutnya dilakukan analisa statistik untuk mengetahui hubungan antara tingkat aktivitas fisik dengan kadar P Selectin 3 bulan pasca KMTP pada SM rematik
Hasil : Pasien yang akan menjalani KMTP memiliki rerata usia 40,00±11,58 tahun dengan proporsi perempuan lebih tinggi daripada laki-laki (74,3%) dan dengan proporsi irama sinus yang lebih tinggi daripada irama atrial (57,1%). Dari uji T didapatkan ada perbedaan bermakna rata-rata kadar P selectin 3 bulan pasca KMTP pada tingkat aktivitas fisik 1-4 METs dan > 4 METs, dimana rerata kadar P selectin 3 bulan pasca KMTP pada tingkat aktivitas fisik > 4 METs lebih rendah secara bermakna dibandingkan 1-4 METs (p=0,003). Setelah dilakukan analisa multivariat terlihat tingkat aktivitas fisik pasca KMTP tetap berpengaruh terhadap kadar P Selectin 3 bulan pasca KMTP (p=0,001). Area Katup Mitral (AKM) pasca KMTP berpengaruh terhadap kadar P selectin 3 bulan pasca KMTP (p=0,018), namun tingkat aktivitas fisik pasca KMTP lebih besar pengaruhnya dibandingkan AKM.
Kesimpulan : Terdapat hubungan antara tingkat aktivitas fisik dengan kadar P selectin 3 bulan pasca KMTP dimana pada tingkat aktivitas yang lebih tinggi (> 4 METs) kadar P selectin lebih rendah 10,489 ug/ml dibandingkan tingkatan aktivitas fisik 1-4 METs.
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ABSTRACT
Background: Mitral stenosis (MS) is an important health problem in Indonesia. P selectin level in MS increases due to endothelial dysfunction and platelet activation. Percutaneous transvenous mitral commissurotomy (PTMC) is one of the management for MS patients. Thus, the physical activity can improve and in turn affect the level of P selectin. There has been no study link the level of physical activity

with the level of P Selectin 3 months after of PTMC.
Method: This is a cross sectional study with 56 subjects who underwent PTMC from May 2013 to February 2014 at the Hospital of National Heart Centre Harapan Kita. Then, 35 samples met the inclusion criteria. Clinical and echocardiography data before and 3 months after PTMC were taken from medical records. Interviews were conducted 3 months after PTMC. Physical activity levels were divided into 2 groups: group 1 (1-4 METs) and group 2 (> 4 METs). Sample for P selectin was taken 3 months after PTMC. Further statistical analysis was done to determine the relationship between physical activity level with level of P Selectin 3 months after PTMC in rheumatic MS.
Result: Patients who will undergo PTMC have the mean age of 40.00 ± 11.58 years with a higher proportion of women than men (74.3%) and the proportion of sinus rhythm is higher than atrial rhythm (57.1%) . T-test analysis result showed significant difference in the average levels of P selectin 3 months after PTMC on the level of physical activity 1-4 METs and > 4 METs. The average P selectin levels on the level of physical activity in group with > 4 METs was significantly lower compared with group 1-4 METs (p = 0.003). After multivariate analysis, the physical activity level still has an effect on the P selectin levels 3 months after PTMC (p = 0.001). The Mitral Valve Area (MVA) after PTMC also has an effect on P selectin levels (p = 0.018). However, the level of physical activity after PTMC has a greater effect than MVA.
Conclusion: There is a relationship between the level of physical activity with P selectin levels 3 months after PTMC.Group with higher activity level (> 4 METs) have lower level of P selectin (with the mean difference levels of P Selectin 10,489 ug/ml);Background: Mitral stenosis (MS) is an important health problem in Indonesia. P selectin level in MS increases due to endothelial dysfunction and platelet activation. Percutaneous transvenous mitral commissurotomy (PTMC) is one of the management for MS patients. Thus, the physical activity can improve and in turn affect the level of P selectin. There has been no study link the level of physical activity with the level of P Selectin 3 months after of PTMC.
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