Kadar prokalsitonin sebagai pembeda demam infeksi dan demam inflamasi pascabedah jantung = Procalcitonin as differences on infectious and inflamation fever after cardiac surgery

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Abstrak

Latar belakang. Kejadian demam pascabedah jantung sering ditemukan akibat tindakan pembedahan maupun penggunaan mesin pintas jantung paru (PJP), demam tersebut sulit dibedakan antara demam akibat infeksi atau inflamasi. Penegakan diagnosa infeksi dengan pemeriksaan kultur membutuhkan waktu lama dan kadang tidak tumbuh bakteri. Prokalsitonin (PCT) diharapkan sebagai penanda infeksi tanpa harus menunggu hasil kultur.
Tujuan. Penelitian ini bertujuan menilai kadar PCT dapat membedakan demam infeksi dengan demam inflamasi pada pascabedah jantung.
Metode. Penelitian ini dikerjakan di Unit Pelayanan Jantung Terpadu RSCM, dengan subyek pasien dewasa pascabedah jantung terbuka dengan menggunakan mesin PJP diikuti selama lima hari adanya demam dengan suhu 37,8° C, tanda dan gejala infeksi. Semua subyek diperiksa PCT dan kultur darah sebelum pembedahan, hari pertama, kedua dan kelima pascabedah. Pemeriksaan kultur dikerjakan atas indikasi klinis adanya infeksi.
Hasil. Sebanyak 59 subyek pascabedah jantung menggunakan mesin PJP, terdapat dua subyek dropout (meninggal pada hari pertama dan kedua), 22 (37,28%) tidak demam, 32 (54,24%) demam inflamasi dan 5 (8,48%) demam infeksi. Infeksi ditemukan dari kultur sputum (Klebsiella pneumonie), hasil kultur darah, luka operasi, dan urin tidak ditemukan pertumbuhan bakteri. Didapatkan kadar PCT demam infeksi 13,48 ng/ ml dan demam inflamasi 6,90 ng/ ml.
Simpulan. Kadar PCT demam infeksi (13,48 ng/ ml) lebih tinggi daripada demam inflamasi (6,90 ng/ ml). Tidak ada beda kadar PCT demam infeksi dan demam inflamasi secara statistik dengan p adalah 0,371.
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Background. Post cardiac surgery fevers usually caused by surgery itself or cardiopulmonary bypass (CPB). Difficulties to differentiated fever caused infection or inflammation. Bacterial culture to prove infections take a long time and sometimes the result is negative. Procalcitonin is sugested infection marker without wait for culture.
Goal. The aim of this study is to know procalcitonin level can differentiate fever cause infectious or inflammation.
Methods. This study performed at Integrated Cardiovascular Unit in RSCM, on adult patients who had open cardiac surgery with CPB, observed for temperature 37,8° C, sign and symptoms of infections, for 5 days. PCT levels and blood culture performed before surgery, first, second and 5th day after surgery. Culture from other sites performed as indicated.
Results. There are 59 have cardiac surgery with CPB, There are two subject dropout (died on 1st and 2nd days), 22 had no fever (37,28%), 32 had inflammation fever (54,24%) and 5 had infectious fever (8,48%). Infection confirmed by bronchial wash culture (Klebsiella pneumonie), no surgical wound infection, blood and urine culture were negative. We have PCT levels infectious group 13,48 ng/ ml and inflammation group

6,90 ng/ ml.

Conclussion. PCT levels infectious group (13,48 ng/ ml) higher than inflammation group (6,90 ng/ ml). Non parametric diagnostic Mann Whitney U test there are no significant differences of PCT levels between infectious and inflammation group, p=0,371.