

# Analisis biaya off-pump CABG dan on-pump CABG pada pasien penyakit jantung koroner di RS Jantung dan Pembuluh Darah Harapan Kita tahun 2012 = Cost analysis of off-pump CABG and on-pump CABG in National Cardiovascular Center Harapan Kita in 2012

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## Abstrak

Rumah Sakit Jantung dan Pembuluh Darah Harapan Kita sebagai pusat Rujukan Nasional memberikan layanan penatalaksana penyakit jantung koroner dengan pembedahan yaitu Coronary Artery Bypass Graft (CABG) dengan teknik Off-Pump dan On-Pump. Perlunya dilakukan cost analysis terhadap dua teknik diatas sebagai evaluasi ekonomi untuk mengetahui teknik yang lebih hemat. Desain penelitian ini obeservasional analitik dengan menghitung unit cost dari setiap teknik dengan membagi biaya preoperatif, perioperatif dan postoperatif. Sampel adalah pasien ASKES yang dilakukan CABG Januari-Agustus 2012 dan didapatkan besar sampel Off-Pump 30 pasien dan On-Pump 40 pasien. Tidak ada perbedaan data demografi dari kedua kelompok.

Untuk utilisasi pelayanan, pasien Off-Pump menggunakan ventilator yang lebih singkat (Off-Pump 6,3 jam  $\pm 2.55$ ; On-Pump 9.7 jam  $\pm 3.51$   $p=0.000$ ), lama di ICU lebih singkat (Off-Pump 1,1 hari  $\pm 0.30$ ; On-Pump 2.28 hari  $\pm 1.79$   $p=0.001$ ) dan lama perawatan lebih singkat juga (Off-Pump 8,2 $\pm 1.27$ ; On-Pump 11.35 $\pm 4.90$   $p=0.001$ ). Untuk perbandingan biaya, tidak ada perbedaan biaya preoperative pada kedua teknik, perioperatif teknik Off Pump lebih hemat (Off-Pump Rp. 64.301.615  $\pm 7.257.330$ ; On-Pump Rp. 68.206.112  $\pm 6.594.156$   $p=0.001$ ) dan teknik Off-Pump juga lebih hemat pada biaya post operatif (Off-Pump Rp. 13.295.739  $\pm 3.810.598$ ; On-Pump Rp. 19.501.919  $\pm 10.655.286$   $p=0.000$ ). Jadi teknik Off-Pump lebih hemat Rp. 10.138.450. (Off Pump Rp. 79.576.505; On-Pump 89.714.955).

.....Introduction. Harapan Kita National Cardiovascular Center is a national referral hospital that provides a surgical management for Coronary Heart disease, Coronary Artery Bypass Graft (CABG), with off-pump and on-pump techniques. The importance of Cost Analysis on these two techniques is as an economic evaluation to analyze which technique has a lower cost. Design/Methods. Analytic observational method is used by calculating unit cost of each technique with further evaluation on preoperative, perioperative, and postoperative cost. We used 30 off-pump subjects and 40 on-pump subjects from ASKES patients that underwent CABG on January-August 2012. Demographically, there are no significant differences on both groups.

Result. We found that the duration of ventilator utilization on off-pump patients is shorter compared to on-pump group (6,3 hours $\pm 2.55$  vs 9.7 hours $\pm 3.51$   $p=0.000$ ). Length of stay in the ICU is also found to be shorter in off-pump group (1,1 days $\pm 0.30$  vs 2.28 days $\pm 1.79$   $p=0.001$ ); therefore, total length of stay is also shorter in off-pump patients (8,2 $\pm 1.27$  vs 11.35 $\pm 4.90$   $p=0.001$ ). The preoperative cost on both groups is found to be similar. Off-pump group had a smaller perioperative cost (Rp. 64.301.615 $\pm 7.257.330$  vs Rp. 68.206.112  $\pm 6.594.156$   $p=0.001$ ). Off-pump group is also associated with lower postoperative cost (Rp. 13.295.739 $\pm 3.810.598$  vs Rp. 19.501.919 $\pm 10.655.286$   $p=0.000$ ). Conclusion. Off-pump technique is found

to have a lower cost than On-pump technique.