21 ISMICS RE-IMAGINED
18-20 June 2021
www.ISMICS.ORG

Off-pump To On-pump Conversion During Off-pump Coronary Artery Bypass Grafting

Abdusalom A. Abdurakhmanov, Mustafa A. Obeid, Oybek A. Mashrapov, Ilkhom A. Abdukhalimov.
Republic Research Center Of Emergency Medicine, Tashkent, Uzbekistan.

Abstract:
BACKGROUND: Beating heart coronary artery bypass grafting is one of the most effective methods of surgical myocardial revascularization in patients with coronary artery disease. It have some advantages compared to conventional CABG, especially in high-risk patients. However, in some cases, it becomes necessary to convert on-pump. We aimed to evaluate the off-pump-to-on-pump conversion and its effect on the results of surgical treatment.
METHODS: This retrospective study included 1222 patients who underwent off-pump CABG at the Republican Research Center of Emergency Medicine from 2013 to 2020 years. The average age of the patients was 57.7 ± 9.0 years, 96% of the patients were male. Angina pectoris of functional class III - IV (FC) was detected in 2.2% of cases, instable angina pectoris - in 95.8% of patients and in 3% of cases, patients were operated on non ST elevation acute coronary syndrome.
RESULTS: 51 (4.1%) patients needed to be converted on cardiopulmonary bypass, of which 31 (2.5%) patients underwent planned conversion, 20 (1.6%) patients were converted on-pump for emergency indications. The dynamics of the percentage of conversion to artificial circulation by years of surgical activity: 2013 - 5%, 2014 - 7.5%, 2015 - 3.5%, 2016 - 3.8%, 2017 - 3.6%. The average stay in the ICU was 66.5 ± 5 hours for converted patients and 31.4 ± 4 hours in patients operated on without conversion. Mortality in cases of conversion was 7.0%, and in patients without conversion - 1.4%. Age over 60 years, the need for inotropes before surgery, the presence of acute coronary syndrome / AMI, and left main stem stenosis were significant risk factors for conversion.
CONCLUSIONS: The rate of off-pump to on-pump conversion in this study was 4,1%, and with an increase operating team's expertise it decreased. Off-pump to on-pump conversion increased the incidence of complications, mortality and the length of the hospital period.

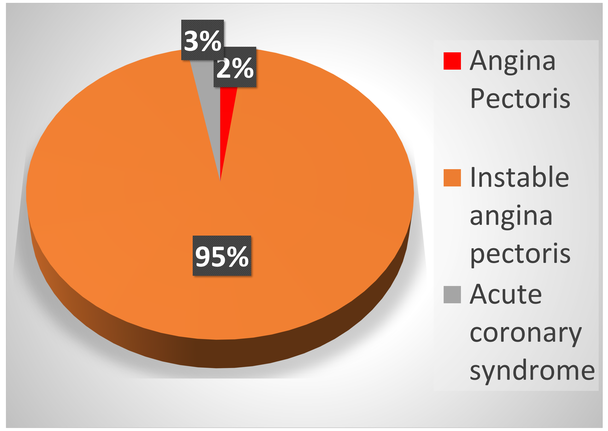
Author Disclosure Information: A. A. Abdurakhmanov, None..
M. A. Obeid, None..
O. A. Mashrapov, None..
I. A. Abdukhalimov, None.

Republican Research Center of Emergency Medicine
Tashkent, Uzbekistan

METHODS

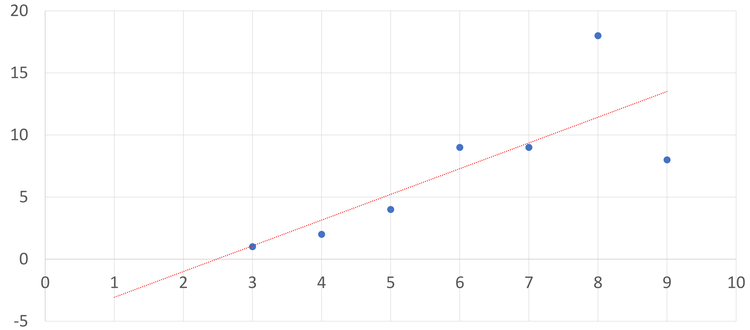
1222 patients underwent off-pump CABG at the Republican Research Center of Emergency Medicine from 2013 to 2020 years.

SEX	MALE	Female
	96%	4%
The average age of the patients	57.7 ± 9.0 years	



RESULTS

Off-pump to on-pump conversion rate	
51 (4.1%)	
Planned conversion	**Emergency indications**
31 (2.5%)	20 (1.6%)



Conversion rate correlated with EuroSCORE (r=0.78)

The average stay in the ICU	Converted patients	Without conversion
	66.5 ± 5 hours	31.4 ± 4 hours
Mortality	7.0%,	1.4%

CONCLUSIONS

The rate of off-pump to on-pump conversion in this study was 4,1%, and with an increase operating team's expertise it decreased. Off-pump to on-pump conversion increased the incidence of complications, mortality and the length of the hospital period.