J Clin Exp Cardiolog 2017, 8:6(Suppl)
DOI: 10.4172/2155-9880-C1-072

Oxidative stress-induced effects on proinflammatory cytokines and vascular endothelial growth factor after interventional treatment of coronary heart disease

Khaybullina Zarina Ruslanovna, Zarina Khaybullina, Mirjamol Zufarov, Nodir Sharapov, Saidarifkhon Murtazaev and **Saodat Abdullaeva**
Republican Specialized Center of Surgery, Uzbekistan

This study aimed to investigate vascular endothelial growth factor (VEGF), reactive oxygen species (ROS) and proinflammatory cytokines: interleykin-6 (IL-6), tumor necrosis factor alpha (TNF-a), C-reactive protein (CRP) in the blood of the patients with coronary heart disease (CHD) after percutaneous coronary intervention (stenting) and coronary bypass operations (CBO). Malondialdehyde (MDA), IL-6, TNF-a, CRP, VEGF was analyzed in 95 patients with CHD pre- and post-procedure. CRP was made in automatic biochemical analyzer "VITROS-350" (USA). IL-6, TNF-alpha, VEGF was measured using ELISA kits. All of investigated markers increased versus the control before treatment ($p<0.05$). MDA and CRP levels didn't change early after coronary stenting, but increased on 49% and 50.8% respectively after coronary bypass operations. TNF-alpha was increased both after stenting and coronary bypass on 39% and 110% respectively versus pre-procedural level. Correlation link MDA/TNF-a have coverage force ($r=0.53$, $p<0.05$) after CBO, whereas after coronary stenting it was weak ($r=0.11$, $p>0.05$). IL-6 and VEGF concentration decreases after stenting (on 1, 5 and 2, 2 times versus pre-procedural) and significantly increases at 30th day after CBO (1, 3 and 10, 1 times versus pre-procedural, $p<0.05$). This data suggest that coronary revascularization by stenting does not accompanied by ROS overproduction and inflammation; neointimal proliferation and intracellular matrix remodeling decreases after stenting. Coronary bypass operations leads reinforcement of inflammatory response and ROS generation, that causes prolonged oxidative stress. In this condition, neo angiogenesis activation approved by VEGF may be broken. Inflammation and oxidative stress after coronary bypass operations can have influence on outcomes of treatment.

zrkhaybullina1@gmail.com

Effect of resveratrol on adverse functions of platelets

Nitin G Dumore and Monali N Dumore
Dadasaheb Balpande College of Pharmacy, India

Objective: Atherothrombosis is a disorder which may lead to increased incidence of cardiovascular diseases. One of the causes for this disorder is platelets aggregation and adhesion. The objective of the present study is to study effect of resveratrol (resv) and clopidogrel (clopi) individually and in combination with inhibition of platelet aggregation and adhesion by in vitro and *in vivo* method.

Material & Method: The platelet aggregation was measured by whole blood aggregometer (Chrono-Log Corporation) in 0.5 ml sample of PRP mixed with ADP by measuring infrared light transmission using different concentration of resveratrol and clopidogrel individually and in combination. Platelet adhesion was measured by micro-plate reader, lab system (Merck Pvt. Ltd.). Nitric oxide estimation was done by nitric oxide colorimetric estimation kit with retro orbital method using healthy male Swiss albino rats.

Result: Resveratrol and clopidogrel at the effective concentration produced minimal platelet aggregation and adhesion effect, when combined together didn't show any synergistic or additive effect. There was no effect of resveratrol on clopidogrel or vice versa on their inhibitory effect. Both individually and in combination, increased bioavailability of nitric oxide revealed significant $P<0.05$.

Conclusion: Since patients on antiplatelet therapy may consume beverages like grape juice, red wine, peanuts etc. which are rich sources of resveratrol do not show any synergistic or additive effect on platelet function, but, increased bioavailability of nitric oxide lead to adverse outcome.

nitingdumore@gmail.com