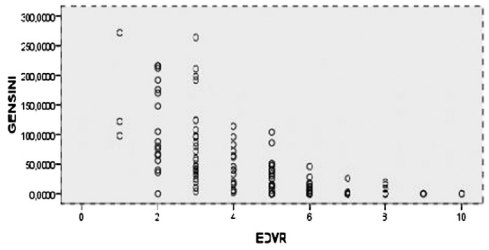

OP-075

Influence of Regular Blood Donation Onto Flow Mediated Vasodilatation

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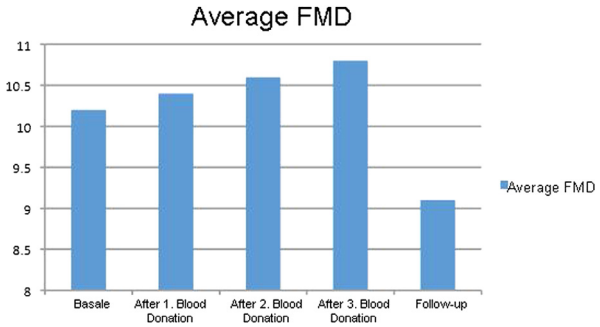
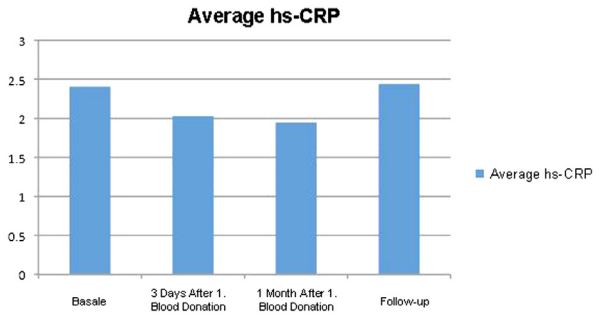
Background: Blood donation might improve vascular function. In this study, we aimed to search whether regular blood donation can improve flow mediated arterial vasodilation or not in healthy adult males.
Methods: 50 consecutive adult male participants without overt cardiovascular disease, who did not donate blood within the last 6 months, were enrolled into the study. Patients with hypertension, diabetes mellitus, chronic inflammatory diseases were not included. Regular blood donation was defined as consecutive blood donation of more than two with intervals exceeding two months but less than three months. All participants accepted to donate blood to the blood bank of our hospital for at least three times with two-three months intervals. Flow mediated vasodilatation (FMD) was measured through the contralateral brachial artery before the initiation of regular blood donation, 1 month after each donation by an experienced author, blinded to study plan. Images were obtained at rest, during reactive hyperemia, induced by ischemia of forearm for 5 minutes. One year after the completion of the active phase of the study, all participants were contacted again, and were asked for continuation of blood donation habit. 21 participants stated that they stopped blood donation completely after the end of the study. These 21 participants were invited for a control visit including FMD evaluation again. All these 21 participants were still keeping similar attitudes at the time of control visit.Plus, hs-CRP was measured before, 3 days after and 1 month after the first blood donation (n=50), and also in participants who accepted the follow up visit (n=21).
Results: Mean age of the participants was 29.7±5.6 years. 49 out of 50 were current smokers. Blood donation improved FMD steadily and significantly as compared to baseline (mean:10.25% vs 10.44% vs 10.66% vs 10.88%, p=0.039, p=0.003, p=0.001, Figure 1). Furthermore, percent improvement in FMD (with regard to donation state after the last donation and basal state) was negatively correlated with the FMD at baseline, i.e, those with lower FMD at baseline improved more after regular blood donation. After a mean follow up period of 18 months with regard to first blood donation (equal to 1 year after the last donation), mean FMD was found to deteriorate by time as compared to baseline in those who stopped blood donation (n=21, 10.2% vs 9.1, p=0.009). In accordance with this, hs-CRP steadily decreased as compared to baseline (mean:2.41 mg/L vs 2.03 mg/L vs 1.95 mg/L, p=0.154, p=0.085, Figure 2). Furthermore, after follow up, it was found to return to baseline level again (mean:2.44 mg/L).
Conclusion: It was shown that regular blood donation improves FMD in healthy adult males. On the other hand, discontinuation of blood donation seems to unshackle progressive decline of FMD.



Temporal change in Flow Mediated Arterial Vasodilatation (FMD)



Temporal change of hs-CRP

Interventional Cardiology

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OP-076

Access Site Complications of Transcatheter Aortic Valve Implantation: Ataturk Hospital Experience

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Aim: The aim of this single-center study is to assess the incidence and predictors of access site complications related to transcatheter aortic valve implantation(TAVI) performed in our hospital which has the largest case series in Turkey.
Materials-Method: From January 2011 to May 2013,we performed successful transcatheter aortic valve implantation (TAVI) with Edwards Sapien XT valve to 91 (28 male) patients by means of transfemoral (85), subclavian (5) and transapical (1) approach. Access site complications were defined according to the Valve Academic Research Consortium (VARC) end-point definitions.
Results: Mean age of patients was 78.3±7.43. 30.8% of them was male (28), 69.2% was female(63). Calculated mean STS was 7.57±5.3 and mean logistic Euroscore was 22.3±16.2. Percutaneous access and closure was performed in 78 patients (85.7%) and a surgical strategy in 13 patients (14.3%). Vascular complications according to VARC classification occurred in 9.9% of patients. Of them, 4.4% was major (4) and 5.5% was minor vascular complications (5).There was negative correlation between diameter of common femoral artery (r=-0.348), external iliac artery (r=0.389), common iliac artery (r=-0.490). However there was positive correlation between diabetes (r=0.346),STS (r=0.330), Euroscore (r=0.255) and vascular complications. Bleeding complications according to VARC classification occurred in 12.4% of patients.When it is classified according to severity, minor (2), major (4) and life threatening bleeding was detected in 2.2%, 4.5% and 5.6% of patients respectively. The incidence of major vascular complications was significantly higher in patients with diabetes, older age, high STS and high Euroscore. Furthermore, hospital stay in patients with vascular complications was significantly longer compared to patients with no vascular complications (10,75±6,2, 6,1±4,4 p:0,01). There was no significant relationship between vascular and bleeding complications and degree of vascular calcification and tortuosity, presence of peripheral artery disease, sex, smoking status and peripheral artery closure strategy (percutaneous or surgical). First 45 patients (group 1) were compared with second 46 patients (group 2) to evaluate the effect of learning curve on vascular and bleeding complications. Both bleeding and vascular complications were detected to be significantly lower in group 2 compared to group 1 (p:0,001).
Conclusions: Frequency of peripheral vascular and bleeding complications occurred in our patients is comparable with world standards. With this study we indicate that major vascular and bleeding complications related to TAVI decrease with experience and increase with older age, high risk scores (STS and Euroscore) and presence of diabetes. These results underline one more time the importance of multidisciplinary modality in patient selection and management for TAVI.

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