**HOW SAFE ARE NEWER ANTICOAGULANTS AND THEIR REVERSAL ANTIDOTES: A CASE REPORT ON RISK-BENEFIT DILEMMA**

**N. Shah**

Internal Medicine, St Mary Mercy Hospital, Livonia, MI, USA

**Background:** Idarucizumab is a humanized monoclonal antibody that neutralizes anticoagulant effects of dabigatran and is especially indicated in case of life threatening bleeding or need for urgent procedure. Its approval came after a prospective cohort study in 2015, where idarucizumab fully reversed dabigatran effect in 98% of patients. However real world clinical experience with idarucizumab remains limited. This case report is about a patient who developed ST elevation myocardial infarction after receiving Idarucizumab. Data suggests that patients receiving Idarucizumab for uncontrollable bleeding has 6.3% risk of developing thrombotic events at 90 days.

**Case Description:** 81 year old male with past medical history of atrial fibrillation on dabigatran, coronary artery disease, peripheral artery disease, left carotid endarterectomy came to Emergency department after having multiple episodes of bleeding per-rectum, which began few hours after resuming his dabigatran 1 day post colonoscopy with polypectomy. On arrival, he was hemodynamically stable, physical examination unremarkable, Hemoglobin 7.8, INR 1.4, aPTT 27.9. He received blood transfusion and 5mg idarucizumab, post which INR was 1.1, aPTT 25.5. CT abdomen/pelvis showed no signs of ischemia/diverticulosis. No more episodes of bleeding per-rectum noted. Next day, patient developed left sided chest pain, EKG showed transient ST elevation in inferior leads and troponin elevated to peak at 22.83. He was loaded with aspirin, brillinta and catheterization revealed triple vessel disease with severe occlusion for which he received coronary artery bypass graft. Echocardiogram demonstrated EF 35-40% with global systolic dysfunction and global wall motion abnormality. Cardiac core measures were continued.

**Conclusion:** Idarucizumab can adequately reverse anticoagulant effect of dabigatran and achieve hemostasis. However, there is a high risk of thrombotic complications in clinical practice than reported, especially in high risk patients with multiple comorbidities. This risk needs to be weighed against any potential benefit especially in non-life threatening bleed, or availability of alternative treatment modalities.