DAY-CASE TREATMENT OF PERIPHERAL ARTERIAL DISEASE: RESULTS FROM A SINGLE-CENTER SAUDI ARABIAN STUDY
Amr Elsaadany, Fida Aleddin, Samy ALAshwal, Mohammed Sharahili, Sulaiman AlSharfan, Taqir Rana, Mohammed AlTwalah, Mohammed Badran, Shagran Binkhamis, MD
Department of Medical Imaging, King Faisal Specialist Hospital & Research Center Riyadh, Saudi Arabia

BACKGROUND
Atherosclerotic peripheral arterial disease (PAD) involving the lower limbs is a common disease associated with a high probability of morbidity and mortality with 2-6 folds higher incidence of both cardiovascular and cerebrovascular disease. Post-percutaneous intervention, patients have traditionally been kept under overnight observation supported mainly by the Society of Interventional Radiology (SIR) 2003 Guidelines despite no dear high level evidence of ideal hospital stay.

The aim of this retrospective single-center tertiary study was to assess the safety and possibility of performing endovascular procedures for management of PAD on an outpatient basis within the Interventional Radiology Department.

MATERIALS AND METHODS
811 (564 Male [69.5%] and 247 Female [30.5%]) percutaneous interventions were performed for treatment of peripheral arterial disease between June 2013 and December 2016. All patients (100%) were Diabetics referred from primary health care and diabetic centers linked to our-hospital and 81.6% were suffering from hypertension as well. Patients' symptomatic of chronic PVD ranged from intermittent claudication to advanced critical limb ischemia and tissue loss.

Patients' demographic data, pre-procedural clinical data as well as procedural details and clinical follow-up up to 30 days post-procedure were evaluated.

Primary efficacy outcomes were: Number of endovascular procedures and technical success rates.

Primary safety outcome was: Freedom from major complications at 30 days.

Secondary endpoints were: (1) re-admission rate within the 30 days post-procedure, (2) identification of any possible factors affecting the primary safety outcome.

INCLUSION CRITERIA
- Single or multilevel arterial disease fro angioplasty, stenting or both
- ASA score less than 4
- Availability to admit the patient in case of complications

EXCLUSION CRITERIA
- ASA score 4 or more
- Acute limb ischemia
- No available patient companion
- Major mobility problems
- Uncontrolled wound infection with high white blood cell count
- High bleeding risk (Platelets <50,000, INR >1.5)

OUT PATIENT SETUP
- Patients were evaluated in the IR clinic where clinical examination, risk factors and co-morbidities were assessed. Duplex US, ABI and PVRs was done on most patients in our vascular lab. CT angiography was performed in some patients.
- CBC, Renal function, eGFR, glucose levels and coagulation profile was done in all patients. Patients would arrive early to the day procedure unit for final assessment to be performed during the morning list.
- During the procedure routine monitoring of pulse rate, blood pressure, ECG and pulse oximetry was done by our experienced nurses.
- Post-procedure care including vital signs as well as regular inspection of the arterial puncture site was performed. Patients were discharged after 4 hours post-procedure if a closure device was effectively used and in cases of remaining hemostasis or closure device failure.
- If a groin hematoma or bruising were noted, bed-side duplex US examination was done and overnight observation was arranged if any complication needed to be observed or managed.

RESULTS
- The Immediate technical success rate achieved was 98.5%, only in 12 procedures (1.5%) unsuccessful attempts to cross the lesions
- The primary efficacy success rate of the day-case procedures was achieved in 97.8% of the procedures performed.
- The rate of cases admitted within the 30 days following the procedure was 2.2% (18 cases were admitted in the hospital, 11 of them were related to post-procedure complications).

CONCLUSIONS
- Performing endovascular procedure on an out-patient basis for treatment of peripheral arterial disease is safe without need for overnight observation and appropriate measures are taken including patient selection and appropriate clinical and departmental setup.