now, open surgical pulmonary endarterectomy was the only option but carried a high mortality in hemodynamically unstable patients. Catheter based pulmonary thromboaspiration and intrapulmonary thrombolysis can be used. We present our experience in 45 consecutive patients of massive PE presenting with cardiogenic shock.

**Methods**: Diagnosis was confirmed by CT Pulmonary Angiography. Venous access was taken from Rt. Common Femoral vein and a 10F sheath was introduced. 10F multipurpose guiding catheter was used to sequentially aspirate clot from main and segmental pulmonary arteries. Residual clot was macerated with 0.035" guidewire and two multi side hole catheters were placed in each pulmonary artery. Tissue Plasminogen Activator (rtPA) was given at a dose of 2mg/hr (in cases where thrombolysis or anticoagulation was not contraindicated). Clinical and angiographic success was monitored by increase in oxygen saturation (Sp02), improvement in hemodynamics, and angiographic assessment (>50 % reduction in clot burden). Follow-up CT scan was performed in 28 patients.

**Results**: N - 45; Only Thromboaspiration (contraindication to thrombolysis) in 8; Thromboaspiration + CDTT in 37 patients.

>50% Drop in PAP 44/45; Significant improvement in SpO2 43/45 and >50% reduction in clot burden 44/45.

Post Procedural SBP > 100 mmHg - 41/45, Mean Procedure Time was 27.8min and mean fall in Hb was 2gm%. Death in 1/45. Post procedure CT Pulmonary Angiography- Complete lysis seen in all survivors

**Conclusion**: Percutaneous catheter directed thrombolysis and thrombectomy is a useful, lifesaving procedure for treatment of massive PE with cardiogenic shock.

## Trans-radial procedures in octagenarians with suspected coronary artery disease

V.S.R. Bhupal, M. Jyotsna, D. Seshagiri Rao

Nizam's Institue of Medical Sciences, Hyderabad, India

**Background**: Trans-radial procedures are gaining importance due to less access site bleeding and patient comfort due to early mobilization.In the hands of experienced operators and highvolume transradial catheterization centers, transradial coronary angiography and intervention offer improved patient comfort, decreased access-site complications, and decreased costs without compromising procedural success or long-term outcomes. Patients presenting with ST-elevation myocardial infarction (STEMI), in particular, benefit from a transradial approach to coronary intervention.

We wanted to study the feasibility and safety of transradial procedures in octagenarians.

**Methods**: We present observational data of trans-radial procedures done in octagenarians in whom CAD was suspected over a period of 2years from 2012JAN to 2013 DEC at a single tertiary care center by a single experienced operator. Trans-radial angio or angioplasty was done using 6FCcordis trans-radial kit through right or left radial route. Data of risk factors, type of presentation of CAD, LV function, blood chemistry, procedural details of angio(tortuosity of vessels including radial loops or calcification of vessels, difficulty in negotiation into ascending aorta, procedural time, fluoroscopic time, amount of contrast, need to shift to femoral, local vascular site complications) and PCI (in addition effective support of guide catheter, complications of PCI) werecollected. Outcomes assessed were procedure failure rate and complication ratepost-procedurally in the hospital and after discharge 15 days.

Results: Total of199 patients were included for final data analysis. Average patient age was  $82.3 \pm 1.7$  years, with average height of  $156.8 \pm 8.4$  cm and average weight of  $60.1 \pm 11.4$  kg. Out of them 60 were females and 139 were males. One forty five patients (72.9%) underwent angiogram and PCI in 54 patients (27.1%). HTN was present in 132 (66.3%) and DM in 84(42.9%) patients.Presentation was ACS in 80 (40.2%) patients. LV dysfunction was present in 75 (37.7%) patients. Right radial route was used in 190 patients and left radial route in 9 patients. Average procedural time for CAG was 9.3  $\pm$  3.8 minutes and 17.5  $\pm$  5.9 minutes for PCI. Mean contrast volume for CAG was 57.4  $\pm$  22.3 ml and for PCI was 89.3  $\pm$ 28.9 ml. Subclavian vessel tortuosity was present in 9 (4.5%) and one case of arterialusoria. 68 lesions were treated in 54 PCI group. Significant lesional calcium was present in 36 (52.91%) lesions. GP 2b/3a inhibitors were used in 14 (24.9%) patients of PCI group. Three cases of PCI procedure failure accounted for a failure rate of 1.5%.No radial to femoral shifts (means 0% radial procedural failure) and no hematomas. Radial spasm in 3 patients relieved with NTG. Asymptomatic radial pulse loss was in 3 (1.5%) patients on the next day of procedure and at 15 days only in one (0.5%) patient. So, in hospital complication rate related to radial procedure was 6 (3%), which decreased to 0.5% at 15 day. No specified complications were noted in any of the patients.

**Conclusion**: Radial artery procedures are feasible and safe even in octagenarianswith good procedural success without significant complication rate.

## Efficacy and safety of heparin, heparin+GPI, bivalirudin during PCI – A prospective real world study

A. Dua, A. Sethi, A. Seth, T.S. Kler, S. Bhandari, S. Chandra, A. Mathur, P. Agarwal, V. Jetly, V. Rastogi, V. Kumar, U. Kaul

Fortis Escorts Heart Institute, New Delhi, India

**Background**: UFH has always been the antithrombotic of choice during PCI. Nevertheless it is associated with major adverse effects like bleeding. Bivalirudin has been in use off late and has been found to be favorable in terms of efficacy & safety. This prospective observational study was an endeavor to find out its clinical utility and cost effectiveness in our setting, in a real world scenario.

Aim & Objective: To compare the anti-thrombotic strategy using Bivalirudin vs. heparin + GPI and UHF alone for patients undergoing PCI at FEHI, a tertiary care centre.

**Methods**: The study includes 1453 all comer patients, who underwent PCI during April 2012 to Sept 2012. Apart from demographic variables, patients were also characterized according to clinical presentation. Study patients were divided into three groups i.e. UHF alone, UFH + GPI and Bivalirudin. Patients were followed up at a thirty day period post procedure. Data was analyzed using SPSS & standard tests of statistical significance.

**Results**: Study population although comparable to other large registries, included younger patients as well as more number of diabetics as expected. Majority of the patients underwent PCI due to presentation as ACS. Use of UFH was significantly less in STEMI patients as compared to other agents. Major bleeding was least i.e. 1.59% in Bivalirudin group as compared to 3.49% with GPI & 5.97% with UFH alone (p=0.007). Use of Bivalirudin resulted in >50% RR