**Transradial Intervention**

(TCTAP A-212 to TCTAP A-213)

**TCTAP A-212**

**Arteria Lusoria**

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**Background:** The transradial approach for percutaneous coronary interventions (PCI) had been established superiority over transfemoral approach due to added advantages like less vascular complications, patients comfort and reduced hospital stay. However, switch over to transfemoral approach is required due to anatomic and functional characteristics such as spasm, tortuosity and congenital anomalies. The arteria lusoria or aberrant right subclavian artery is one of the congenital anomaly where right subclavian artery arises from posterior and distal part of arch of aorta observed in 0.2 to 1.7% cases which often requires switch over to alternative approach due to technical difficulties. The utility of EBU or XB 5, 6 Fr guiding catheters for it has been proven but till achieved success rate is low. We adopted the technique of using Judkins left 5 Fr diagnostic catheter in arteria lusoria cases for coronary angiography through radial approach. The aim of this study is to prove efficacy and safety of this technique in patients with arteria lusoria.

**Methods:** We prospectively analysed 76 cases of arteria lusoria from July 2011 to September 2013 among 4012 patients who underwent transradial coronary angiography. The arteria lusoria is suspected when guide wire repeatedly enters into descending aorta rather ascending aorta. It is confirmed when the catheter makes acute angle (>700) in anteroposterior view. It is also confirmed by aortography in 450 left anterior oblique view.

**Technique:** The regular terumo 5 Fr. Tiger diagnostic catheter (Terumo Corporation, Tokyo, Japan) was exchanged with LIMA catheter to enter into ascending aorta. Then the terumo 0.015.

**Results:**

<table>
<thead>
<tr>
<th>Total no of cases underwent transradial coronary angiography</th>
<th>4012</th>
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</thead>
<tbody>
<tr>
<td>Total no of arteria lusoria cases</td>
<td>76</td>
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<tr>
<td>Prevalence of arteria lusoria</td>
<td>1.89%</td>
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<tr>
<td>Acute complication (dissection, Stroke)</td>
<td>0%</td>
</tr>
<tr>
<td>Procedure time</td>
<td>15</td>
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</table>

**Conclusion:** The arteria lusoria is not uncommon as thought. It is probably more prevalent than that reported in the literature. The coronary angiography failure rate was reported as high as 40% of such cases due to technical difficulties with regular transradial technique. The technique of using Judkins left diagnostic catheter with long amplatz super stiff guide wire achieved success rate about 90% of cases. The success rate of Judkins left diagnostic catheter was better than using guiding catheter like EBU/XB. We do not observed acute complications like aortic dissection, stroke in any one of these cases. Thus this technique is promising with high success rate without any acute complications for transradial coronary angiography in arteria lusoria cases.

**TCTAP A-213**

Feasibility and Safety of Catheterization of Left Internal Mammary Artery Grafts from Right Radial Approach

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**Background:** Transradial approach (TRA) is a preferred method for coronary angiography and interventions due to reduced vascular and cardiac complications and increased patient’s comfort and satisfaction. TRA in patients with previous CABG is technically challenging. In cases when both LIMA and RIMA in situ or LIMA and left radial artery (LRA) are used as grafts the left radial approach can not be used and TRA is frequently considered as contraindicated. We describe our initial experience in selective LIMA catheterization from right TRA in unselected series of patients using a single dedicated catheter.

**Methods:** We studied ten consecutive patients with a history of CABG referred for cardiac catheterization. Eight patients had both LIMA and RIMA in situ as grafts, one patient had LIMA and LRA and in one patient the use of left TRA was difficult due to morbid obesity. We used a dedicated Bartorelli-Cozzi catheter to enter left subclavian artery from right TRA and to selectively engage LIMA.

**Results:** An adequate radial access was obtained in all patients. In seven patients a successful selective LIMA angiography was performed, in two patients the angiography was non-selective but with good image quality and in one patient the right TRA failed because of severely calcified and tortuous left subclavian artery and converted to a left radial approach. In five patients the angiography was followed by angioplasty. There were no procedure-related complications.

**Conclusion:** The angiography of LIMA grafts from right TRA is feasible and safe. In patients with previous CABG, the presence of LIMA graft not precludes the successfull diagnostic and interventional procedures from the right TRA.

**Valvular Heart Disease**

(TCTAP A-214)

**TCTAP A-214**

Early Regression of Indexed Left Ventricular Mass Together with Diastolic Function Improvement After Successful Transcatheter Aortic Valve Implantation

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**Background:** Severe aortic stenosis is associated with left ventricular (LV) hypertrophy resulting in impaired diastolic function. We investigated the benefit of transcatheter aortic valve implantation (TAVI) in high-risk patients with severe aortic stenosis in LV mass regression and changes in LV diastolic function 6 months after TAVI.

**Methods:** Comprehensive echocardiography, including tissue Doppler imaging and clinical assessment were performed at baseline and at six months post-implantation with Edward Sapien XT Valve. Devereux formula was used to calculate the LV mass indexed to body surface area.

**Results:** Thirty patients successfully underwent TAVI. Maximum transvalvular aortic pressure gradient and mean transvalvular aortic pressure gradient were reduced from 90. Conclusion: Significant LV mass indexed regression associated with improvement in LV diastolic function was found in patients with severe aortic stenosis 6 months after successful TAVI. These changes may have relevant clinical prognostic value.