

OC1.10**Clinical Efficacy and Economic Impact of an Augmented Reality Navigation System: Experience On 498 Percutaneous Computed Tomography-Guided Pulmonary Biopsies**

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Background: To validate the reality navigation system SIRIO performance on CT-guided percutaneous pulmonary biopsy (PLB). Complications rate and histological sample quality were evaluated, in relation to lesion size and location. The economic impact was analyzed by comparing device and patient management costs and refunds by national healthcare system. **Method(s):** 496 patients over 18 years with lung nodules suspected of malignancy and non-diagnostic bronchoscopy or inadequate us-guided biopsy, were included. Patients with an affected coagulative profile or performance status were excluded. Maximum lesion diameter (ID), distance between lesion and pleural surface (DPS), distance traveled by the needle (DTP), procedure timing (PT) and validity of histological sample were evaluated. Costs for the consumptive material, procedure, CT and histocytopathologic analysis of the sample were analyzed, considering surgical day-hospital and PAC (comprehensive outpatient performance) as two different repayment options. **Result(s):** Histopathological diagnosis was obtained in 96.2%. LD mean was 20.7 mm, DPS 12.4 mm, DTP 7.9 mm and PT 29.5 minutes. The thoracic radiation dose was 51.2±49.1 mGy-cm. Procedural complications were reported in 156 cases, with 23 (4.6%) major complications. In these cases, DTP was significantly higher. About economical analysis, 44 PLB/month for 4 years, considering day-hospital, and 33 PLB/month for 2 years, considering PAC, are needed to get a complete depreciation. **Conclusion(s):** SIRIO is a useful tool for improving success rate and diagnostic accuracy with a significant reduction of complications and pt. Economic analysis is also positive, not considering its possible use for tumor ablation, with much higher refunds.

OC1.11**Carotid Stenting by Proximal Protection, Aspiration Flow Reversal and Distal Anchoring using Double Mesh Stent: An Ideal Technique for Unstable Plaques**

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Background: Carotid artery stenting (CAS) with distal protection/Endarterectomy are established novel procedures. A modified technique of carotid stenting was found to further minimise the procedural and post procedural embolic events and has superior ease, efficacy and safety profile compared to existing techniques. **Method(s):** Dedicated plaque characterisation and diffusion

imaging of brain was done on the previous day by 3T MRI. Stenting was done under local anesthesia, temporary pacing, radial arterial line and via femoral access as routine. 9 F balloon guide catheter was placed just proximal to the stenosis and connected to the aspiration pump. The forward flow in CCA was arrested by balloon inflation and flow reversal in ICA was achieved by continous aspiration using pump, during each step – Initial wire passage, pre dilatation, negotiation of stent and during deployment. A double mesh stent was used, the distal end of which was positioned distally in landing and slowly deployed. Aspirated material was sent for histopathology study. Diffusion MRI of brain was done the next day. **Result(s):** There were no neurological events during or post procedure. No incidence of intimal injury which may happen with filter especially in cases of ICA tortuosity. Excellent stent apposition and total absence of plaque intrusion through struts due to additional mesh was worth noting. An OCT can demonstrate this excellently. Not a single diffusion restricting lesion in MRI next day. **Conclusion(s):** Proximal protection with ICA flow reversal during each step and use of double mesh stent with distal anchoring can potentially nullify embolic events associated with CAS. This technique holds high promise to be the procedure of choice in CAS especially with unstable plaques.

OC2.1**Endovascular Treatment in Acute Basilar Artery Occlusion “Experience in Indian Patients”**

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Background: To assess the efficacy and feasibility of endovascular treatment in acute basilar artery occlusion. **Method(s):** Total 90 patients who underwent treatment with low-dose intraarterial alteplase combined with mechanical clot disruption for basilar artery occlusion were studied over period of ten years. All patients undergone either cerebral CT/MR with cerebral angiography followed by intraarterial treatment. We did not use intravenous route in all patients. After diagnosis of an occlusion on diagnostic angiography, an end-hole microcatheter over a microguide wire was advanced through 6-f guide catheter into occlusion site. The microcatheter tip was placed into the thrombus, and then a 20 mg bolus of alteplase was manually infused over 3 to 5 minutes. Mechanical clot disruption by multiple passes of the microwire with microcatheter through the clot was done after 20 mg bolus of alteplase. Followed by withdrawal of the microwire from the microcatheter, an additional 10 mg was manually infused for 3 to 5 minutes through microcatheter at the site of the remaining thrombus. Mechanical clot disruption using microcatheter and microwire was performed in remaining thrombus. Patients in whom distal migration of thrombus into posterior cerebral artery was additionally infused the 10 mg of alteplase through microcatheter. Percutaneous angioplasty or/and stent insertion performed in patients who were not achieved the complete recanalization. Recanalization status was classified according to the thrombolysis in cerebral ischemia (TICI) scale and recanalization was defined as TICI grades II or III. Variable parameters like age, sex, time to treatment, alteplase dose, duration of the procedure, recanalization, and symptomatic hemorrhages were analyzed. Clinical outcome measures were