

assessed on admission and at discharge of national institutes of health stroke scale (NIHSS) score, at 3 months after treatment modified rankin score (mRS). **Result(s):** 90 patients with acute basilar artery occlusion (32 women, 58 men) with a median age of 69 years (range, 44 -85 years). The median NIHSS score was 14.4 (range, 2-33) on admission and median time from symptom onset to intraarterial alteplase therapy was 320 minutes (range, 160-820 minute). The median intraarterial alteplase treatment duration was 20 minute (range, 10-25) and the alteplase dose was 20- 50 mg (median, 35 mg). Of these patients, sixteen patients were performed the additional injection of alteplase due to distal migration of thrombus into the posterior cerebral artery. Five patients were the severe stenosis of basilar artery after alteplase infusion and mechanical clot disruption with microcatheter and microwire. Of these patients, three patients were performed the stent placement after angioplasty and two patients were performed the angioplasty. Recanalization (TICI grade II or III) was achieved in 85 patients (94.44%). TICI grade III was occurred in 43 patients (47.78%) include, and TICI grade II was achieved in 42 patients (46.67%). Five patients (5.55%) was failed the recanalization of posterior circulation. Of these failed treatment patients, three patients had a massive thrombus into the vertebrobasilar artery, one was stopped the treatment due to procedure-related subarachnoid hemorrhage, and one had a diffuse and long segmental stenosis of basilar artery. There was symptomatic hemorrhage in four patients. Two patients were occurred the procedure-related hemorrhage. Eight patients (8.89%) died within one-week after procedure. At discharge, the median NIHSS score was 7.2 (range, 0-27). The NIHSS score of 55 patients was improved. In 30 patients, the NIHSS score was increased. At the 3-month follow-up, the functional outcome was favorable (MRS, 0-2) in 50 (55.56%) of the 90 patients. Unfavorable (MRS, 3-6) in 40 (44.44%) patients. **Conclusion(s):** We concluded from the study that low-dose intraarterial thrombolytics with mechanical clot disruption is feasible, safe and effective treatment for the acute basilar artery occlusion. A high rate of recanalization, high rate of survival rate and good functional outcome can be achieved.

## OC2.2

### Finding Predominant Vessels Supplying Presurgical Embolization of Nasopharyngeal Angiofibroma

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**Background:** Nasopharyngeal angiofibroma is a benign fibrovascular tumor affecting young adolescent boys, originating from the posterolateral wall of the nasal cavity. The young patients mostly present with chronic epistaxis, Nasal obstruction, rhinorrhea, Conductive hearing and diplopia. Study is done to find the predominant arterial feeder during pre surgical embolization of Juvenile Nasopharyngeal angiofibroma (JFA) in order to reduce blood loss and intra operative time during surgery. **Method(s):** Four vessels angiography (DSA) was done in all patients including internal and external carotid angiography with superselective angiography of vessel supplying tumor. Presurgical embolization of 150 patients done with spongostone in angiography suit of Neuroradiology department, Lahore General Hospital, Lahore, Pakistan with age ranging from 12-18 years males from January

2014 to December 2017. All patients underwent surgery with in 24 hours. **Result(s):** Out of 150 patients Internal maxillary artery was supplying 111 patients, 30 were supplied by accessory meningeal artery and 09 were supplied by ascending pharyngeal artery. Presurgical embolization with Spongostone proved significant reduction in intra operative blood loss and reduced surgical resection time. **Conclusion(s):** Internal maxillary artery proved to be the major feeder supplying JNFA. Presurgical embolization appears to be the treatment of choice prominently reducing intra operative blood loss, minimizing the need of blood transfusion with short intra operative time resulting in quick and better surgery.

## OC2.3

### Cookie Cutter Technique for Percutaneous Direct Puncture Glue Embolization of High-Flow Craniofacial Arteriovenous Malformations

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**Background:** Direct puncture embolization with glue is an effective technique for pre-operative devascularisation of craniofacial arteriovenous malformations. Venous outflow and arterial inflow of the lesion need to be limited during injection of embolic material. Manual compression is the standard procedure for flow reduction, but when an AVM has multiple channels of venous drainage, achieving successful blockage of blood is technically difficult. This study demonstrates the use of a circumferential cookie cutter ring to reduce flow, with better results compared to manual compression. **Method(s):** This is a retrospective study of ten patients, over a period of two years, with craniofacial arteriovenous malformations who were treated with direct percutaneous injection of glue. Pre-embolization angiography was performed to see arterial feeders and venous draining veins. Adjunctive manoeuvres were used during embolization, including external compression of venous pouch with circular cookie cutter rings of different sizes varying based on lesion size. Glue cast was localized within and around the margins of circular cookie cutter ring without any distal migration. **Result(s):** No neurological complications secondary to the embolization procedure were observed. The arteriovenous shunts were successfully occluded in all cases. There was partial occlusion in two cases. Total occlusion achieved in five cases when embolization was followed by surgery. Only one case required a second session to achieve total occlusion. Post embolization, there was minimal residual flow in one patient, who declined further treatment due to mitigation of symptoms. The shape of glue cast was changed in two cases after removal of cookie cutter when low concentrated glue was used. No skin necrosis was seen post embolization. **Conclusion(s):** Percutaneous direct puncture embolization with glue saves time and is a safer method for superficial craniofacial AVMs with prominent venous pouch when external compression was applied with circumferential cookie cutters to reduce venous outflow.

## OC2.4

### Posterior Fossa Arteriovenous Malformations: Endovascular Management Challenges

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