

Background: Endovascular therapy (EVT) is considered to be the first line treatment for aneurysm however this treatment option has its limitations in cases of wide necked aneurysm (WNA). These include high risk of coil protrusion in the parent vessel and early recanalization in case of bifurcation aneurysms. These limitations prompted the development of more complex endovascular techniques. In the present short review, we give introduction of these techniques and devices and provide case examples performed in Rashid hospital Dubai. **Methods:** Balloon Remodeling: This technique is probably the more frequently used in the treatment of WNBAs. Balloon is temporarily inflated in front of the aneurysm neck followed by coil packing and deflation before permanent coil deployment to evaluate possible migration. In more than 30 cases of ruptured and unruptured WNA's dealt at Rashid hospital, the remodeling technique was shown to be safe and potentially improved anatomical results. Stent Assisted Coiling: A stent can be deployed across the aneurysm neck in the parent vessel and coiling performed with catheter progressed through the stent struts. Y Stenting: When the aneurysm is centered at bifurcation, a Y stenting technique can be used. Although the chances of morbidity are higher in this technique, we did not encounter any complications in our patient series at Rashid Hospital except occasional spasm in parent vessel. Woven Endobridge Device: WEB is an intrasaccular flow disrupter having a braided nitinol mesh. The mesh structure of the WEB provides a stentlike apposition to the aneurysm wall. Flow Diverters: Flow diverters are low-porosity stents designed to reduce hemodynamic exchange between the aneurysm and the parent artery, which promotes thrombosis and neointimal overgrowth over the aneurysm neck. Flow-diverter treatment is associated with high efficacy, but with safety that is inferior to standard coiling. pCONus: The pCONus is a stent-like endovascular implant featuring a distal end that opens like a blossoming flower with its four petals resting on the inside of the aneurysm along the neck. The petals support the deployment of coils inside the aneurysm. Other Devices: Pulse Rider device self expandable implants and Luna device are few other techniques employed in the coiling of wide neck aneurysms. **Results:** Provided in the form of pictures case examples. **Conclusions:** The management of a patient with a wide necked cerebral aneurysm is complex, however the continuous development of new neuro endovascular techniques and materials nowadays offer a significantly wider range of therapeutic possibilities in cases of aneurysms with unfavorable size and configurations which have traditionally been treated surgically.

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Endovascular Management of Intracranial Dissecting Aneurysms: Single Center Experience

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Background: Management of intracranial dissecting aneurysms is controversial and technically challenging. The aim of this study is to evaluate the efficacy and safety of different endovascular management strategies. **Methods:** A retrospective analysis of all patients that underwent endovascular treatment of either ruptured or unruptured intracranial dissecting aneurysms, between 2011 and 2016, at a tertiary care center was performed. The technical and clinical results of different techniques were analyzed. **Results:** Among our 24 patients, 14 patients had

ruptured aneurysms and 10 cases had unruptured aneurysms. Parent vessel occlusion was performed in 12 cases, and artery preserving technique was successfully performed in 8 cases. Two cases showed spontaneous thrombosis of their aneurysms before treatment and 2 cases rebled and died before treatment. Among the 8 cases treated by artery preserving technique, 2 cases were treated by coils, 2 cases by stent-assisted coiling, 2 cases by flow diverter stent, 1 case by balloon assisted coiling and 1 case by 2 braided stents. No procedure related complications. Recurrence occurred in 1 case which is not treated yet. **Conclusions:** Endovascular approach offers many effective and safe strategies for the management of the intracranial dissecting aneurysms. The involved artery and the collateral circulation should be taken into consideration during decision making.

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Sub Arachnoid Hemorrhage: Update in Endovascular Treatment of Intracerebral Aneurysms

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Background: Sub arachnoid hemorrhage (SAH) is mostly the result of ruptured aneurysms. There are two types of aneurysms, saccular and fusiform. Coiling is most prevalent endovascular treatment of saccular aneurysms. Challenge comes for wide neck saccular and fusiform aneurysms. Objective is to assess the latest endovascular treatment of wide necked saccular and especially of fusiform aneurysms. **Methods:** 178 patients were coiled between Jan 2015 to Nov 2016 in Department of interventional neuroradiology, Lahore General Hospital, Lahore. Patients were of both genders with age ranging from 22-65 yrs. Among them eight had wide neck or fusiform shape, which are difficult to coil by conventional coiling. **Results:** Out of 178 patients 170 were coiled with conventional coiling. Other eight had either wide neck or are of fusiform in shape. Flow diverters are latest mode of treatment for such aneurysms. Eight flow diverters were deployed five on fusiform and three on wide necked aneurysms. These are nickel cobalt soft stents especially designed for intra cerebral use. Wide necked aneurysms also had partial coiling for further reinforcement. All patients were successfully treated with no complications. **Conclusions:** Endovascular coiling is better option for treatment of both anterior and posterior circulation aneurysms with less morbidity and mortality. Flow diverters have added another option for endovascular treatment of wide necked and fusiform aneurysms.

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Local Experience with a New Retrievable Device for Stroke Thrombectomy in a Tertiary Academic Center

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Background: Intravenous tPA has limitations in treating patients with large vessel occlusion stroke. The use of intra-arterial catheter for mechanical removal of thrombus was approved