

# Summary

## **Summary**

Cerebral arteriovenous malformation (AVMs) represent the most common type of vascular malformation to become symptomatic, patients with cerebral (AVMs) have a continuous risk of hemorrhage which carries the risk of mortality approximately 20% to 30 % per Bleeding episode.

Magnetic resonance imaging (MRI) in combination with magnetic resonance angiography represent very active fields of researches and development in medical imaging .

Magnetic resonance imaging provides a safety imaging modality for the patients with cerebral AVMs as it doesn't exploit ionizing radiation ,also it is the imaging modality of choice in diagnosis of AVMs as MR imaging together with MR angiography was able to demonstrate AVMs as regards it nidus, arterial feeders and draining veins. In many cases the results of MR angiography were comparable with those of conventional angiography.

The goals of the imaging work up of cerebral AVMs are not only the diagnosis of malformations but also their radioanatomic characterization in order to define an appropriate treatment plan for a given lesion, to evaluate and compare results of treatment modalities. This made MR angiography a better for diagnosis, treatment planning and follow up of such patients.

In this work 10 patients who have cerebral AVMs had been studies, they had been subjected by MRI and some of them are also subjected by MRA and conventional angiography.

The value of MR angiography as a vascular portray of modality can be attributed to its non-invasiveness, high flow sensitivity and the results of it nearly similar to that of conventional angiography.