# INTRODUCTION

Intracranial aneurysms are acquired lesions that are most commonly located at the branching points of the major arteries coursing through the subarachnoid space at the base of the brain, they are relatively common incidental finding at postmortem examination with a prevalence ranging from 1 to 6 percent among adults in large autopsy series, many of these aneurysms, however are very small and the prevalence of incidental intracranial aneurysms among adults undergoing cerebral angiography is between 0.5 and 1 percent. The majority of intracranial aneurysms (80 to 85 percent) are located in the anterior circulation, most commonly at the junction of internal carotid artery and the posterior communicating artery, the anterior communicating artery complex, or the trifurcation of the middle cerebral artery. Aneurysms of the posterior circulation are most frequently located in the bifurcation of the basilar artery or the junction of a vertebral artery and the ipsilateral posterior inferior cerebellar artery **(Keedy, 2006).**

Most aneurysms are asymptomatic, however, one of the most frequent causes of subarachnoid hemorrhage (SAH) is ruptured aneurysms which carries mortality rate between 30 to 60 percent in the first 30 days. Moreover many patients who survive experience severe debilitation and morbidity **(Ohkuma, 2003).**

Ruptured aneurysms not only cause SAH but can also cause subdural or intracranial haematomas **(Rinkel, 2003).**

Selective digital subtraction angiography is considered the reference standard in the diagnosis of intracranial aneurysms, however this examination carries an additional risk of morbidity and mortality **(Keedy, 2006).**

The development of multi-detector computed tomography (MDCT) scanners has been one of the most important technological advances of CT technology **(Duddulwar, 2004).**

CT angiography (CTA) however is playing an increasing role in the evaluation of patients suspected of having intracranial aneurysms. Regarding the care of the patients with SAH, CTA may offer some intrinsic advantages over Digital Subtraction Angiography (DSA). In the classic clinical scenario, patient clinically suspected of having SAH undergoes CT of the head. CTA may easily be added to this initial imaging examination with little extra time needed and can provide virtually unlimited viewing angles in three dimensional views which facilitate the assessment of morphologic details relevant to aneurysm therapy **(Chappel, 2003).**