

ABSTRACT

A STUDY OF CIRCLE OF WILLIS WITH ITS VARIATIONS AND ITS CLINICAL CORRELATIONS

The brain is richly supplied through the internal carotid arteries and vertebra-basilar arteries. Circle of Willis shows wide range of variations in its formation, shape and its calibre. Under normal condition, the blood flow will be redistributed but in pathological states like thrombo-embolism, aneurysms there will be failure of redistribution of blood flow causing ischemia and necrosis of the affected area.

AIM AND OBJECTIVES:

The aim of study of circle of willis in both morphology and in radiological images with respect to its formation, shape and calibre. The variations like absent vessels, hypoplasia, accessory vessels and anomalous origins were studied and the incidences of these variations were tabulated.

MATERIALS AND METHOD:

This study was done in both Dissection and Radiological methods by using fifty brain specimens from unclaimed adult cadavers in the Department of Anatomy and from the Department of Forensic Medicine. Radiological images obtained from the Department of Radiology.

OBSERVATION:

Out of Fifty specimens, 21(42%) in the morphological study and out of 50 radiological images ,16(32%) of the radiological study showed variations like absent vessels, hypoplasia, accessory vessels and

abnormal origin. This study shows wide range of variations both in morphology and radiological images.

CONCLUSION:

A sound knowledge about the normal anatomy of Circle of Willis and its variations are required during surgery and interventional procedures. This study will help them to diagnose the pathological conditions and any variations pertaining to anatomical structure of Circle of Willis.