EDUCATIONAL OBJECTIVES

• What is the WHO classification of Brain Masses?
• What is NEW? How does this classification help in Tumor Subtyping
• Impact on clinical-radiological practice of MRI and Advanced MRI findings?
• Background of WHO classification Grades I-IV and Tumor Subtyping
• New 2007 WHO classification, New entities and variants
• ADDING IMAGING TO CLASSIFICATION and tumor subtyping

PRESENTATION SUMMARY:

German pathologist Rudolf Virchow first introduced the term "glioma" in 1860. In 1926 Bailey and Cushing devised the first major classification system for brain tumors based on cell type.

In 1949 Kernohan suggested different histopathologic appearances represent varying degrees of histologic differentiation. Ringertz then proposed that astrocytoma consisted of three grades: astrocytoma, astrocytoma with anaplastic foci, and glioblastoma in 1950. The St. Anne-Mayo system based upon the absence or presence of four criteria: nuclear atypia, mitoses, endothelial cell proliferation, and necrosis was proposed in 1981. The 1st edition of the WHO Blue Book was published in 1979. Subsequently the 2nd, 3rd and 4th editions of the WHO Books were published in 1993, 2000 and 2007 respectively.

We will review the WHO classification of gliomas along with radiological correlation and then introduce some new entities described in the most recent 2007 WHO classification. These include: Papillary glioneural tumor (PGNT), Extraventricular neurocytoma (ENV), Angiocentric glioma, Rosette-forming glioneural tumor of the 4th ventricle (RGNT), Papillary tumor of the pineal region (PTPR), Atypical choroid plexus papilloma (ACPP), Pituicytoma, Spindle cell oncocytoma of the adenohypophysis (SCO). Conventional MRI and advanced MRI tools are used for tissue characterization, determination of glioma biology and subtyping.

REFERENCES:


4. The 4th Edition of the WHO Classification of Brain Tumors 2007
