
Use of imaging modalities and the effectiveness of radiation therapy on brain tumors in a tertiary hospital in Nigeria.


ABSTRACT

Background: Brain neoplasia is of concern in our environment because there are no preventive measures or sufficient availability of definite treatment. With imaging, the disease can be detected and the treatment evaluated. Materials and Methods: In this retrospective study carried out at a tertiary hospital in Nigeria, diagnostic imaging modalities used for imaging brain tumors, the pattern of tumors identified at histology, and the response of brain neoplasia to radiation therapy were analyzed. Results: Out of the 147 patients included in the study, the mean age was 44.5 ± 2.3 years of age. For diagnostic imaging, 60% used only computed tomography (CT) scan, 24% used magnetic resonance imaging (MRI), while 16% used both CT scan and MRI. Histologically, primary tumors (54%) occurred more than metastasis (46%). Breast metastasis (33.3%) was the singular most common tumor, followed by astrocytoma (19%). For definitive management, almost half of the cases (49%) had radiotherapy alone. 25% had radiotherapy with surgery, 10% had both radiotherapy and chemotherapy while 16% had all three. Four weeks posttreatment, there was 78% positive response to therapy. Conclusion: In our environment, the radiological evaluation of brain tumors is often by CT scan, even though MRI offers better soft-tissue contrast. This may be ascribed to the relative affordability and availability of CT scan. Radiation therapy is effective in the treatment of brain tumors.