

Brain Tumor Rehabilitation: Is It Unique?

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Fact Sheet

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Background Information

In 2018 cancer was the 2nd leading cause of death in the United States.¹ Brain tumors are the 8th most common cancer and have a diverse clinical course depending if they are malignant (i.e. invasive) or nonmalignant (i.e. well-encapsulated). Severity and presentation of impairments are dependent on the size, characteristics and location of the tumor.

Epidemiology/Statistics

Prevalence, incidence, and five-year survival rates vary greatly. The prevalence of Americans living with a primary brain tumor is 700,000.² In 2020 estimated incidence rates of benign versus malignant tumors are 61,430 and 25,800, respectively, and approximately 3,657 children are living with brain tumors.²

The Role of Physical Therapy

Therapists should understand common adverse effects of chemotherapies, surgery, and other oncological treatments, such as immunotherapies, and their impact on plan of care.³ For instance, chemotherapy as a singular oncological intervention, which can lead to cognitive, neurological, and motor deficits^{3,4} and radiation is commonly used when there is a well-defined tumor or few brain metastases. Alternatively, chemotherapy can be used to enhance the effects of radiation.⁵ Perhaps unique to the combined use of chemotherapy and radiation to treat brain tumors is the presentation of pseudoprogression.³ Pseudoprogression occurs usually within 2 months of radiation therapy and is identified by worsening symptoms and signs and increased enhancement on MRI imaging without tumor growth.³ Fortunately, symptoms may improve over the course of several months.^{3,5} Using standardized assessment tools⁶, appropriate to the level of the patient's cognitive and physical function, in a timely fashion, may aid in understanding the impact of primary tumor progression and potentially elucidate a concern such as pseudoprogression.

In the setting of the best care, a typically aggressive tumor, such as a glioblastoma multiforme, has a reported 5-year survival rate of 33%.⁷ This suggests years of survival post-intervention, which require attention to quality of life concerns. Physical therapy is well positioned to remediate a multitude of concerns that impact quality of life during survivorship.

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Beyond understanding oncological interventions and their potential effects, it is important for therapists to develop a comprehensive and extended plan of care, including patient preferences, caregiver education⁸ and survivorship needs.

Research Updates

The APTA Oncology Academy has produced several systematic reviews of evidence to support the use of assessment tools in the domain of oncology. Please see the following link for a comprehensive list:

<https://oncologypt.org/wp-content/uploads/2020/03/EDGE-Annotated-Bibliography-8.19-update-1.pdf>

References

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