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Intracranial Tumors- Overview, Histological Types, Symptoms and Treatment Plans

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ABSTRACT

People, in general, are affected by a brain or intracranial tumor when abnormal cells started functioning within their brain. This paper explores mainly tumors that affect the brain. Almost every type of brain tumor might create symptoms which are based on the parts of the brain affected. In order to better understand reasons of occurrence intracranial tumors in various sections of the population, the study examined the relationship between sociodemographic variables, i.e., age, gender and marital status and the relative frequency of intracranial tumors as part of a study. Samples are collected based on the information from Uzhhorod Regional Center of Neurosurgery and Neurology in Ukraine. And factors such as age, gender and marital status has been considered to examine tumor size variation. The ratios of organ cancers in Ukrainians are evidently increasing. Besides, there has been growing trend in affected rates in both the genders of CNS cancers have been noticed in all the records. The ratio of most harmful brain tumors is comparatively in minimal ratio in East and Southeast Asia, and India. On the other hand, the highest ratio has been noted in European countries and as well United States, and Ukraine is one of those countries. The major burdens of cancer frequency in Ukraine have been noticed in the lung, breast, and prostate and brain. Of these, brain tumor rate in Ukraine had been hardly studied. The major difference in frequency in Asian and European populations implies the potential influence of genetic or environmental factors in malignant brain tumors. Continuing monitoring of tumor ratio in Ukraine is essential to comprehend how best to reduce cancer burden globally and to explain the causes of provincial variations, for example access to diagnosis methods and ecological exposures.

Keywords: *Intracranial tumors, symptoms, tumor incidence in Ukraine, treatment plans, survival rate of cancer in Ukraine*

INTRODUCTION

There are few known causes of intracranial tumors and nervous system amongst adult peoples, and it is considered important to have a look at relationships between tumor frequency and sociodemographic factors, i.e., a cause of disease. The Chernobyl Nuclear Power Plant collision (April 1986) took place at Ukraine has been one of the worst accidents in history. On account of extensive exposure to radioactivity, there has been an enduring concern in terms of the long-term effects, specifically the possibility of malignant disease, for people in the surrounding regions (Dmytriw and Pickett 2013).

A problem which complicates understanding of these contexts is the probability that intracranial tumors endure to go underdiagnosed in some sections of the people, even in this age of highly developed imaging technology, therapeutic knowledge, and increased access to health care. It is largely assumed that the considerable growths in the registered incidence of intracranial tumor which occurred amongst the old population in many countries over the past few years

replicate developments in the diagnosis of intracranial tumors instead of a true, major epidemic (Leung, et al 2019). These tumors differ evidently in extent of tumor, history, and medical representation; spongioblastoma and other high-level gliomas likely to create more critical and promptly developing symptoms, while low-grade gliomas predictably create less severe, recurrent or gradually progressive signs and symptoms. Leung, et al (2019) stated that ratio of intracranial tumor incidence rates has increased in Ukraine in Volyn, specifically among female population.

Central nervous system (CNS) tumors are considered to be rare tumors including less than 2% of all tumors (Takei, et al 2007). Though, an increasing global tendency in these tumors has been detected over the decades with new possible risk elements being recognized for brain tumors. The CNS includes parts such as cerebrum, brain-stem, spinal cord, cranial nerves, and the blood membranes supplying these constructions. CNS tumors exhibit a bimodal age division with one highest-level in paediatrics and second highest among people aged between 45–70 years (Lee, et al 2010). Meningioma, astrocytoma, schwannoma, metastatic tumor, lymphoma, medulloblastoma, central neurocytoma, etc. are some of the histologic types of brain tumors. CNS Tumors are histologically classified by the WHO as tumors of neuroepithelial nerve, meninges, lymphomas, metastatic tumors, etc (Louis, 2007). Frontal lobe is found to be the most common position in brain tumors. The symptoms of intracranial tumors are based on the tumor size, its position, and its level of growth. Yeole, (2008) specified that brain and CNS cancer was found to be more common in men than women. Study by Hamdani, et al (2019) reported that male-to-female proportion of CNS cancer was 1:0.8.

Worldwide age-standardized death rate for primary malignant intracranial tumors is 2.8 for men population and 2.0 for women population per 100,000 (GLOBOCAN, 2002). As with this incidence, predictable mortality rate is comparatively greater in more developed countries than in developing countries (Bondy, et al 2008). Family history of intracranial tumors apart from recognized signs have yet to be made clear; though, intracranial tumors accumulate in families. Some forms and dosages of ionizing radioactivity are largely recognized causes of brain tumors (Schlehofer, et al 2005). Even delicate cognitive deficiency could pointedly control a patient's everyday life, and unknown, might influence a patient's capability to follow a healing regimen without considerable assistance. As pointed out by Bondy, et al (2008) consistent neurobehavioral measures can be employed as an indicator for deciding treatment effects for intracranial tumor patients.

Primary intracranial tumors are generally stemming from the cranial nerves, germ cells, solid organs, or an isolated subclinical main tumor are referred to as primary brain tumors. These cancer in adult people are uncommon with a predictable 23,380 new cases detected in the year 2014, resulting in 14,320 deaths; Genetics evidently has an important role in brain tumor (Lu, et al 2013). Exposure to high dosage of radio activity is found to be the environmental risk element for brain tumors (Fisher, et al 2006). Medical signs and intracranial tumors might be general or crucial. Symptoms, for example headache and as well seizures, are as a result of high-level intracranial pressure. As stated by Perkins and Liu (2016) treatment decisions are adjusted by clinicians on the basis of tumor category and position, growth potential, and the patient's age and health.

The WHO (2007) Central Nervous System (CNS) classified all tumor types with an astrocyte phenotype distinctly from persons with an oligodendroglial phenotype, that develops particularly in the brain (Louis, et al 2016). CNS World Health Organization (WHO) (2016) describes the most important reformation of the diffuse gliomas, and includes new characteristics which are described by histological along

with molecular properties, such as glioblastoma and intracranial tumors. The recent update of CNS WHO (2016) breaks with the age-old standard of diagnosis on the basis of microscopy by integrating molecular factors into the categorization of CNS tumor entities (Louis, et al 2016). As pointed out by Louis, et al (2016) the above classification is generally on the basis of collective phenotypical and genotypical classification, and on the origination of "integrated" diagnoses.

WHO classification of tumors of the CNS includes astrocytic tumor, oligodendroglioma, ependymoma, neuronalglial tumors, embryonal tumors, i.e., medulloblastoma, CNS- primitive neuroectodermal tumor, etc (WHO, 2007). Glial tumors is definitely the most common kind of CNS tumors, in adults and as well children. It stems from the brain structure cells; the glial cells, which is classified into some tumor families that are later classified into entities, patterns and variations on the basis of the assumed cell of source and the growth prototype. Al-Hussaini, (2013) stated that CNS-primitive neuroectodermal tumor (CNS-PNET) is considered as a diverse group of weekly- segregated small round blue cells which could be viewed either in the brain-stem or in the medulla spinalis.

Intracranial tumors are considered to be the most widespread solid tumor and the second major cause of cancer-related mortality rate in individuals particularly among 0 to 19 years of age. Several studies imply transmittable exposures in older childhood likely to increase intracranial tumor risk, while earlier infections are likely to lessen brain tumor risk. The potential between radiotherapy and consequent intracranial tumor growth has been projected at 7 to 9 years with an increased probability for younger children (Andersen, et al 2013). One common opinion is that level of risk generally differs by age at prognosis and category of tumor (Johnson, et al 2014). Mathews, (2013) also emphasized major relationship between CT scan exposure level and appearance of brain tumor at early stage of childhood. Johnson, et al (2014) put forward that diagnosis is usually appeared poor, although survival rate increases with affected person's age and also reported that exposure to radioactive will likely to increase brain tumor risk, highlighting the significance of minimizing radiation exposure from diagnostic tests to the extent possible in children to mitigate cancer risk.

Meningioma has a significant part to play in the chronicle of intracranial tumors, since other tumors dissipate as the associated brain lyses and falls apart following death, sign of meningioma endures in ancient skulls. Previously, intracranial tumors resulted in fatality and were paved the way for longstanding symptoms of pains, seizures, and even unconsciousness stage, i.e., coma. Physicians identified that these signs and causes were triggered by high-level intracranial stress and advanced skull trepanation to alleviate it Castillo, (2014) and the author reported that CT scan considered to be the most accurate diagnostic technique in patients with intracranial tumors.

Two regions in eastern Europe (that is Poland and the Russian Federation) and Slovenia in southern Europe as well revealed ever-increasing average annual ratios, of 2.7%, 1.9%, and 2.6%, correspondingly. Study by Miranda-Filho (2017) reported that the highest ratios were observed largely in European countries, whilst the least ratios were seen mainly in Asian regions. Such variances might be partially linked with the different genomic context of these populations.

Brain tumors are usually experienced in the regular practice of neuroimaging. Various options are presently existing in practice to deal with these neoplasms and focus on a sequence of surgery, radioactivity, and advanced chemotherapeutic agents. Besides, these treatment options are ever increasing and each lead to changes in pathophysiology

which could radically transform the imaging appearance of the affected part. Treatment response of intracranial tumor conditions depends on both imaging techniques and medical parameters. Though each intracranial tumor acts contrarily and holds various histological aggressiveness, as stated by Kessler and Bhatt (2018) it is extremely considered important to concentrate on the two primary categories of intracranial tumors, that is, high-grade gliomas and metastases.

LITERATURE REVIEW

Introduction

This chapter explains the overview of intracranial tumor, signs and symptoms and its treatment techniques. The chapter discussed the existing studies relating to intracranial tumor.

Intracranial tumor- signs and symptoms

Chang, et al (2015) presented an overview of intracranial tumor and what healthcare experts might expect, and also provide guidance, in treating someone with an advanced, life-threatening intracranial tumor, with a specific attention on end-of-life problems. Though certain issues and complications brain tumor patients face at the end stage are generic with many other types of cancer, there is a subcategory of challenging issues rare to patients with brain tumors. The study reported that a steroid for example dexamethasone is considered to be the most common medicine recommended to patients affected with brain tumor to treat cerebral edema and consecutively manage complications and symptoms. The most common signs affected by brain tumor patients are frequently linked with tumor location, which will possibly result in increased level of intracranial pressure. The study reported drowsiness, headache, focal neurological symptoms, cognitive and behavioural changes, seizures, etc. are some of the common signs found among intracranial tumor patients.

Wilne, et al (2011) reported that brain tumors are found to be common in children. Children suffered from intracranial tumors are more likely to feel sick and having ailing conditions for months before diagnosis process. The study reported that prolonged time between symptoms inception and diagnosis is related with increased illness rate. Headache, nausea, visual and motor symptoms, behavioural change, etc. are emphasized as some important symptoms of the intracranial tumors.

Wilne, et al (2006) categorised the symptoms of intracranial tumor into 11 categories, which include headache, vomiting, weakness, seizures, focal difficulties, growth abnormalities, growth in head circumference and signs into different groups, which include cerebellar signs, sensory abnormalities, and poor range of consciousness. The nature of these symptoms will likely to take place at any stage prior to treatment process was recorded.

Study by Danesh-Meyer, (2012) dealt with various symptoms involved in intracranial tumors. Papilledema was found to be one of the common symptoms of intracranial tumors, which occurred because of intracranial pressure. Enlarged blind-spot and other visual disorders are some of the other causes of brain tumor.

Ross, et al (2019) studied about the various symptoms of intracranial tumors. Primary intracranial tumors for example gliomas characterize 17% of all childhood tumors. Signs and symptoms of the intracranial tumor are generally based on the size and place of the tumor presents and the local mass consequence on neighbouring neurological structures. Symptoms involved in intracranial tumor are irritability, lethargy and nausea. High-level intracranial pressure, stroke and seizure might indicate acute decompensation. The study also reported that radiation dosages more than 50 Gy will result in critical focal tissue impairment, myelitis and as well optic toxicity.

As stated by Borja, et al (2012) brain tumors in the adult and paediatric population are generally primary in cause. The age of the patients, symptoms and the

imaging features and location of the tumor presented are basic for continuing the diagnosis. The most common symptoms presented in intracranial tumor are an impulsively increasing head circumference and seizure attacks.

As stated by Strong, et al (2015) brain tumors characterize a class of neoplasms stemming from brain cell, respectively with their own exceptional biology, symptoms, diagnosis, and treatment. Regardless of the various group of neoplasms exemplified, most intracranial tumors stick to same medical presentations and diagnostic examinations. Though tumors affecting the CNS are comparatively rare, they are generally very challenging to treat and bring about uneven morbidity and mortality. Patients with intracranial tumors could present with focal signs and symptoms. In general, generalized symptoms take place shortly in the disease pathogenesis since the tumor develops and creates increased intracranial pressure resulting in headache, nausea, sickness, and transformed cerebral function. The study concluded that the sequence of poor diagnosis and inadequate therapeutic selections make further novelty and examination a priority to enhance medical consequences for patients suffering from CNS tumors. The study also reported that seizures are found to be one common symptoms in patients with intracranial tumors.

Kakshapati, et al, (2018) carried out a cross-sectional study on histopathological analysis of CNS tumors. The CNS tumors in paediatrics and adolescents showed substantial histologic diversity. The disorder configuration was found to be atypical between the age limit of 0-10 years and as well 12-20 years. The paediatric age group exhibited incidence of embryonal tumors while the older ages are impaired more from astrocytic tumors. This research reported the most generic CNS tumor to be meningioma next to astrocytic tumors and pituitary adenoma. The range of CNS tumor in paediatrics exhibited different histologic pattern in line with the age. Besides, in age group of 0-10 years embryonal tumors are considered more common while age category between 12-20 years exhibited inclination towards astrocytoma as in adult people. Seizures, abnormal eye movement, complications while balancing, memory problems, behaviour changes are found to be some of the common signs in CNS tumor patients.

Aryal, (2011) stated that the objective of this research is to find out the comparative frequency of biopsy proven CNS tumors. The study analysed dataset diagnosed with CNS tumors in line with the WHO's diagnostic criteria. The most common type of CNS tumors was astrocytoma, followed by meningioma and metastatic tumor. Amongst the other metastatic tumors, adenocarcinoma was found to be the most widespread histologic type.

Handayani, et al (2014) discussed the various intracranial tumors involved in intracranial tumors. The study was particularly carried out to define the EEG changes in patients with intracranial tumor with signs of seizures and the connection between the tumor location by the location of the EEG malformation. The findings reported that most of the patients have an irregular EEG which is more generic and some aberrations are found in non-tumor regions. This specified that the seizures which take place might be more as a result of irritation lacerations than for the development of epileptic focus. The findings also reported that headache is also found to be the major symptoms of intracranial tumors.

Kerkhof, (2013) pointed out that seizures are found to be common sign that most commonly appear in intracranial tumor patients, the capability of tumors to engender impulsiveness of neuronal influenced by the type and degree of progression; besides, the frequency of seizures is comparatively high as the pathophysiology; intracranial tumors will also likely to cause functional changes in

neurons. Giulioni, (2014) reveals some of the hypotheses linked with the biochemical and electric activity beyond the tumor locations which literally causes epileptogenesis. The findings also reported that a slow growing tumor might influence the electrical connectivity in non-tumor locations and also it will likely to increase the risk-level of seizures.

Table 1. Intracranial tumor- signs and symptoms

S.No	Author	Year	Findings
1	Chang, et al	2015	Drowsiness, headache, focal neurological symptoms, cognitive and behavioural changes, seizures, etc. are some of the common signs found among intracranial tumor patients.
2	Wilne	2011	Headache, nausea, visual and motor symptoms, behavioural change, etc. are emphasized as some important symptoms of the intracranial tumors.
3	Wilne	2006	Headache, vomiting, weakness, seizures, focal difficulties, growth abnormalities, growth in head circumference are found to be common symptoms
4	Danesh-Meyer	2012	Papilledema was found to be one of the common symptoms of intracranial tumors, which occurred because of intracranial pressure.
5	Ross, et al	2019	Irritability, lethargy and nausea, stroke and seizure are found to be some of the major symptoms found in intracranial pressure patients.
6	Borja, et al	2012	The findings reported that increasing head circumference and seizure attacks are primarily found among intracranial tumor patients.
7	Strong, et al	2015	The study also reported that seizures are found to be one common symptoms in patients with intracranial tumors.
8	Aryal	2011	The most common type of CNS tumors was astrocytoma, followed by meningioma and metastatic tumor.
9	Handayani, et al	2014	The study emphasized that headache is also found to be the major symptoms of intracranial tumors.
10	Kerkhof	2013	Intracranial tumors will likely to cause functional changes in neurons among patients.
11	Giulioni	2014	The study reported that a slow growing tumor might influence the electrical connectivity in non-tumor locations and also it will likely to increase the risk-level of seizures.

Diagnosis and treatment for intracranial tumor

Majithia and Chakravarti (2016) studied about the treatment techniques for intracranial tumors. Intracranial tumors are one group of malignancies which could largely be classified as primary or secondary, which originated from other parts of the body. The study reviews the imaging techniques employed for intracranial tumor description and their position in radiation planning. The major histological group of primary brain cancer are the gliomas. The study figured out that the suggested treatment modality for benign cancer generally is surgical resection, with least frequent usage of radiotherapy. On the other hand, for harmful intracranial tumors, multimodality therapy is frequently employed that integrates systemic therapy and as well radiotherapy. The objective of radiotherapy technique for intracranial tumors is to eliminate serious and microscopic virus whilst restricting normal tissue noxiousness.

As stated by a Shiro, et al (2021) it is not an easy task to diagnose an intracranial tumor solely on the basis of the initial symptoms. The study found out that mesenchymal non-meningothelial tumors, and oligodendroglial tumors and meningiomas are the primary histological types of intracranial tumors. Radiotherapy and radiosurgery as a separate process or in combination for the diagnosis is suggested for intracranial tumors patients.

Aldape, et al (2019) specified that intracranial tumors are found to be the most feared disease compared to all other types of cancer as it is involved in brain. Intracranial tumors have been challenging to diagnose and treat, largely as a result of the biological features of these tumors, which often contrive to limit progress. The findings reported immunotherapy as a major diagnosis process for treating intracranial pressure. However, blood–brain barrier is considered to be a major obstacle to the effective treatment of intracranial tumors. Neurosurgery and radiotherapy are found to be common diagnosis technique for intracranial tumor patients. The findings emphasized that the usage of liquid biopsies and highly developed imaging techniques must be explored instantly to offer added

approaches to define tumor response in advance during treatment.

Kase and Caplan (2016) pointed out that intracranial tumors are a well-known but rare cause of intracranial haemorrhage. The bleeding movement in neoplasms is assumed to be strongly linked with the intensity of their vascular elements and their pathologic and neoplastic strength. The radiologic diagnosis by CT scan could be established easily in cases of compound metastatic abrasions but cases of ICH into a single tumor could be more problematic to diagnose. The study put forward that a low-density depression of the margin of an intracranial haemorrhage on CT must increase the suggestion of a main tumor nodule. As the study concluded these medical and radiologic characters must provoke a search for a primary or malignant brain tumor with magnetic resonance imaging (MRI) and cerebral angiography.

Lapointe, et al (2018) expressed that the recent developments in molecular biology have enhanced the understanding level of intracranial tumors. This development in genomics, in addition to significant innovations in tumor and CNS immunology, has paved the way for a new era in neuro-oncology and therapeutic improvement of cancer. Current treatment method is generally focused on gene therapy treatments and novel drug-delivery technologies. The findings reported that combination therapies should be recommended for intracranial tumor patients.

Dumitru, et al (2021) emphasized magnetic resonance imaging (MRI), and CT scans for diagnosing intracranial tumor. Meningiomas are found to be common primary tumors of the CNS. Also, the study reported that diagnosis is generally on the basis of neurological examination and imaging techniques such as MRI and CT.

Roth, et al (2021) discussed the role of anti-oedema treatment in treating intracranial tumor. The diagnosis of tumor-related oedema is generally made by MRI. When the cancer patient is unable to undertake MRI, CT will also be suggested to figure out oedema. Significantly, the demand for anti-oedema treatment is not merely described by the range of oedema but must be largely on the basis of patient's diagnosis and treatment condition. The findings reported that anti-oedema treatment must be taken into account in brain tumor patients necessitating alleviation from neurological deficiencies.

Navarro-Olvera, et al (2016) discussed various treatment techniques involved for brain tumor, which include surgery, radiotherapy techniques, chemotherapy and also drugs for example antiepileptics and corticosteroids. The study also reported that surgery is one of the effective solutions for treating cancer. The findings also emphasized that absolute surgical resection will likely to provide local cure. The prevalence of Dural metastases has grown in recent period on account of progressions in new neuroimaging performances and as well an increase in the survival rate of tumor patients as a result of upgraded therapies.

Study by Siregar, et al (2018) examined the combination of surgery, radiological, and chemotherapy treatment for intracranial tumors in the children. Children aged less than 3 years experienced signs for example headaches, seizures (56%); Astrocytomas and medulloblastomas were found to be the most common categories of brain tumor. Impaired vision was also found to be the common cause among affected children. The success rate of treatment for intracranial tumor is generally based on the child’s age, the surgical type, chemotherapy, and radiotherapy. The findings reported that an interruption in diagnosis will result in insufficient treatment options. The study reported most common treatment plan for intracranial tumors is a blend of surgical operation, radiotherapy, and chemotherapy. With this sequence, around 75% of children affected with brain tumors before the age range of 20 have a life expectation of five years.

Yerramilli, et al (2018) discussed the importance of proton therapy in treating brain tumor. The practice of proton therapy in a medical background was initially suggested on the complete basis of the inherent characteristics of the particle. As the findings suggested, in order to reduce the exposure level of radiation therapy, proton therapy is highly recommended to treat brain tumor. Though, proton therapy provides various physical and anatomic improvements, the force and charging properties of protons have possible radiobiological benefits also.

Ningaraj, et al (2007) opined that the classification and recognition of potential markers for targeted therapy will certainly assist the clinicians in such a way to propose the treatment accordingly. In general, after surgical procedures, there is a possibility for brain tumor to redevelop, which result in low survival period. Accordingly, the importance is primarily on the targeted cancer therapies (Butowski and Chang 2005), which balance prior treatments and lessen the drug resistance in tumor cells and the toxicity in unaffected areas in brain. The study also reported novel cancer therapies, which are immunotherapy, bacterial agents, viral oncolysis, and receptor tyrosine kinase inhibitors (RTKIs) and combinations of various techniques.

Table 2. Diagnosis and treatment for intracranial tumor

S.No	Author	Year	Findings
1	Majithia and Chakravarti	2016	The study figured out that the suggested treatment modality for benign cancer generally is surgical resection, with least frequent usage of radiotherapy.
2	Shiro, et al	2021	The findings reported that radiotherapy and radiosurgery as a separate process or in combination for the diagnosis is suggested for intracranial tumors patients.
3	Aldape, et al	2019	The findings reported immunotherapy as a major diagnosis process for treating intracranial pressure. The study also emphasized that combination of therapies will more likely to treat intracranial tumor in a more positive way.
4	Kase and Caplan	2016	The findings emphasized that the medical and radiologic characters must provoke a search for a primary or malignant brain tumor with magnetic resonance imaging (MRI) and cerebral angiography.
5	Lapointe, et al	2018	The study focused on gene therapy treatments and novel drug-delivery technologies. The results suggested that combination of therapies should be recommended for intracranial tumor patients.
6	Dumitru, et al	2021	MRI or CT is highly recommended for diagnosis of intracranial tumor patients.
7	Roth, et al	2021	Anti-oedema treatment is suggested for treating intracranial tumor. The diagnosis of tumor-related oedema is generally made by MRI.
8	Navarro-Olvera, et al	2016	Surgical intervention is said to be effective for complete cure of brain tumor.
9	Siregar, et al	2018	The findings reported most common treatment plan for intracranial tumors is a blend of surgical operation, radiotherapy, and chemotherapy.
10	Yerramilli, et al	2018	Proton therapy is found to be effective in treating intracranial tumor.
11	Ningaraj, et al	2007	Targeted therapy is considered as an effective treatment technique for intracranial tumor.

5. DISCUSSION

Intracranial tumors are comparatively common neurosurgical disorders and are linked with high-level morbidity and mortality rate. The current paper sought to establish the pattern of intracranial tumors and CNS tumors, their overview, symptoms along with treatment techniques. In 2016, there have been 330 000 incident cases of CNS cancer and mortality rate of 227 000 globally, and age-consistent incidence ratios of CNS cancer intensified worldwide by 17·3% between 1990 and 2016 (Fitzmauric, et al 2016). In general, intracranial tumors are categorized into malignant and benign tumors. Besides, malignant cancer can be either primary or metastatic (Moon, 2019). Metastatic abrasions are considered to be more common than primary cancer. Intracranial tumors are most frequently located in the posterior fossa in almost 70% of tumor cases, in the supratentorial location in 30%, and could take place at any age, though the most recurrent age is between the group of 2 and 5 years. The classification, in general, can be made either based on histology or on the position of tumor site. Intracranial tumor is considered to be one of the most crucial cancers causing death, signifies the 17th most common cancer globally and represents 1%–2% of all tumors. As a result of a considerable increase in the prevalence of, and mortality rates from, brain tumor in

several developed regions, this kind of tumor has exceptional importance. The prevalence of brain tumors is rising progressively all over the world, and this is primarily linked with the growth of newer diagnostic techniques and the increased ratio of imaging modules (Mohammed, et al 2019). Glioma, meningioma, and as well as metastases, are relatively rare in children (Rees, 2007). On the other hand, benign glioma and craniopharyngiomas constitute a considerably high-level percentage of intracranial tumors in paediatrics than in adult population (Rees, 2007). In general, the ratio of adults with intracranial tumors increases with patients' age, allowing that metastatic lesion are more likely to increase over time. The most common brain tumor categories in adult population are meningiomas, which comprise almost 33.8% of all primary brain tumors, gliomas (Kase and Caplan 2016). Intracranial tumors are generally divided into WHO classification scale that could provide patients and medical practitioners with further information in terms of diagnosis and management (Moon, et al 2019). Intracranial tumors will possibly cause orofacial pain when implicating the trigeminal nerve or glossopharyngeal root. Around 7% of affected people with trigeminal nerve struggle with a mass lesion alongside the course of the nerve root (Rappaport, 2008). When the age of the affected person decreases, the probability of a cancer or multiple sclerosis making the trigeminal signs becomes greater. In study by Mohammed, et al (2019) the most commonly affected intracranial tumor was meningiomas (30.8%) a total number (227) of cases, next to astrocytic and pituitary adenomas.

The mean age of report of intracranial tumor in relation to gender exhibited that female population represented at a comparatively higher age in the adults, but earlier than men population in the paediatric groups (Ekpene, et al 2018). Headache was found to be the commonest sign as reported in one other study (Howlett, 2008) followed by visual impairment and seizures. Tagoe, et al (2015) stated that seizure is the most common sign among intracranial tumor patients. Focal neurologic deficit is also found to be one of the commonest symptoms (Ekpene, 2018). Gliomas were found to be the widespread tumor type, representing 38.2% of intracranial tumors next to meningioma (Howlett, 2018; Olufunsho, et al 2011). Though gliomas are found to be widespread in men population (Howlett, 2018), there was a minor female majority in study by Ekpene, et al (2018), which is close to an earlier publication in Andrews et al (2003). The reason cited was that female population are likely to search for medical treatment more than their opposite counterparts. Glioma was found to be the commonest intracranial tumor next to meningioma (Louis, 2016). Astrocytoma was found to be the most common category of Glioma (Kapoor and Gupta 2021). The convex shape is considered as the most common location of meningioma (Louis, 2016). The incumbrance of CNS cancer is combined by the circumstance that successful treatment is multimodal and involves access to surgical care, radioactivity therapy, and chemotherapy.

6. CONCLUSION AND RECOMMENDATION

Intracranial tumor and CNS tumors have received lots of attention not only as a result of their poor diagnosis, but as well for their strong influence on neurologic functions, mental health, and standard of living. Trends in intracranial tumor incidence are complicated to interpret in view of the huge array of various histological categories and potential objects associated with changing diagnostic techniques and repository practices. Over the last few years, advancements in diagnostic techniques have exhibited a tendency toward an increased rate of intracranial tumors. However, the survival rate of intracranial tumor patients is still questionable. Survival rate for CNS tumors

differs across region, partially on account of the difficulty of differentiating malignant from benign disease. The most common treatment method for intracranial tumor is a sequence of surgical operations, radiotherapy, and chemotherapy. A tumor detected in the infratentorial will likely to form intracranial pressure, frequently making patients to suffer with severe signs and symptoms; such patients must be considered for better treatment as soon as possible. An age association with survival of brain tumors in affected people should be considered. The current paper can act as a base for intracranial tumor survival and CNS tumor analysis with histopathological categories of risk elements and categories of surgical procedure. Before assuming the findings, some limitations of this paper must be considered. The review has been carried out for all intracranial and CNS tumors, irrespective of their behaviour. Maximum surgical procedure is considered critical to ensure ideal results for longer-life expectation. The location of the cancerous cell and existing medical services make total surgical treatment impracticable, so radiation therapy is essential to terminate the cancerous cell which is still left behind. Therefore, future studies can compare surgical operations along with a chemotherapy and radiotherapy and continuous monitoring of survival rate of patients.

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