Patients tolerated the treatment well with acceptable acute toxicity and expected short-term survival outcome. In paediatric CSI patients, modification in standard contouring guidelines required to achieve better results with PBT.

**LINC-13. SUBLEPEDYMYAL GIANT CELL ASTROCYTOMA IN A CHILD WITH TUBEROUS SCLEROSIS COMPLEX: A CASE REPORT**

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**INTRODUCTION:** Tuberculous sclerosis complex (TSC) is an autosomal-dominant genetic disorder causing the formation of hamartomas in many organs, including the brain. It is generally benign but can block the flow of cerebrospinal fluid that increases intracranial pressure and leads to severe neurologic and behavioural changes. Subependymal giant cell astrocytoma (SEGA) occurs in 10-15% of TSC patients. Routine brain surveillance is important to look for SEGAs in all TSC patients. CASE: We report a girl who was previously diagnosed with TSC at the age of two. She had hypomelanotic macules, facial angiofibroma, and a shaggy patch. Her first brain magnetic resonance imaging (MRI) was normal. She had routine consultation until she complained of recurrent headaches, walking instability, and seizures six years later. Her brain MRI showed a solid heterogeneous intraventricular mass suggesting SEGAs. She had multiple subcortical and periventricular lesions, (1) multiple tubers, and (2) hydrocephalus. She underwent emergency ventriculoperitoneal shunt (VP shunt) and tumor removal surgery. The histopathology examination matches SEGAs, World health organization (WHO) grade I. It consists of polygonal to spindle cells with abundant eosinophilic cytoplasm. There are also large to multinucleated cells. After surgery, she had significant clinical improvement, and the seizure was controlled with valproic acid. CONCLUSION: It is essential to do brain evaluation using brain scan or MRI every 1-3 years as surveillance recommendation in all TSC patients. Early detection dramatically increases the chance of giving early treatment or surgery to lower complications and provide better outcomes.

*Key words:* Subependymal giant cell astrocytoma, tuberous sclerosis complex, surveillance, early diagnosis

**LINC-14. A SINGLE CENTER RETROSPECTIVE ANALYSIS OF PEDIATRIC PINEOBLASTOMA IN BEIJING**

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**OBJECTIVE:** To explore the clinical characteristics and outcome in children with pineoblastoma in Beijing. **METHODS:** Clinical data of 18 pediatric patients with newly diagnosed pineoblastoma admitted to Beijing Shijitan Hospital between January 2014 and November 2021 were retrospectively analyzed. The diagnoses were confirmed by pathology. **RESULTS:** Male/female ratio=8:1. The median age at diagnosis was 4.7 (range, 0.2-12.6) years, with 2 cases in infancy, and 13 cases ≥ 3 years. The symptoms at diagnosis included headache (31%), vomiting (29%), convulsions (28%), and visual disturbance (22%). Two patients developed cranial nerve symptoms at diagnosis. Ki-67 index was under 30% in 5 cases, 30-80% in 10 cases, and ≥80% in 2 cases, respectively. All were treated with surgery, and 12 children underwent gross total resection (GTR). Seventeen cases were administered both radiotherapy and chemotherapy, with one case only radiotherapy followed by surgery. Median follow-up time was 54 months. Nine patients developed a recurrence and 2 patients died at last follow-up. The 1-year/3-year progression-free survival (PFS) and overall survival (OS) were (77.8±10.5/51.1±10.3%), and (100/99.0±8.7) %, respectively. The 3-year OS of boys was significantly higher than that of girls (50.0% vs. 20.0%) and the children ≥ 3 years had worse OS in cases with GTR (91.7% than 83.3%). However, the differences were not significant in the above two groups. The children with Ki-67 index ≥80% had worse 3-year OS than those <80% (p=2.8000, P=0.005). The median time of the order of cranial nerves disturbances treated by chemotherapy was better than that of the inverse order (29 vs 13, 2=16.528, P=0.011). CONCLUSION: Pineoblastoma is rare and often fatal, but with better OS in our center, although the PFS is dismal. Boys, GTR resections, and Ki-67 >80% tends to have better OS, and the order of irradiation followed by chemotherapy tends to have better PFS.

*Keywords:* pineoblastoma; therapy; survival

**LINC-15. SUSTAINING MULTIDISCIPLINARY CARE OF CHILDREN WITH CENTRAL NERVOUS SYSTEM TUMORS DURING THE COVID-19 PANDEMIC**

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**INTRODUCTION:** A multidisciplinary team (MDT) approach is essential for quality cancer care. Since 2019, we have conducted regular MDT meetings for pediatric central nervous system tumors at the Philippine General Hospital. Because of COVID-19, an abrupt transition from in-person to virtual meetings became necessary. METHODS: We reviewed the proceedings of MDT meetings for pediatric CNS tumors from February 2020–December 2021. We identified the strategies and adaptations of our pediatric neuro-oncology group, and outlined recommendations for other institutions in low- and middle-income countries. RESULTS: Our pediatric neuro-oncology group conducted 18 virtual MDT meetings during the study period. Meetings were scheduled every last Tuesday of the month, with pediatric oncologists, neurosurgeons, radiation oncologists, radiologists, and neuropathologists regularly attending. We invited other specialists as needed. In total, we had 135 case discussions for MDT meetings, or about 8 patients per meeting. These included both inpatients (74%) and outpatients (26%). Ten patients received prior treatment elsewhere. At the time of the meeting, 86% were postoperative, 8% were preoperative, and 6% did not require surgery. Most (60%) had malignant CNS tumors and 15% had disseminated/leptomeningeal disease. Histopathologic diagnosis was obtained for 62 patients (79%). Concerns addressed were: formulating a treatment plan (88%), surveillance strategy (10%), and diagnostic workup (5%). DISCUSSION: Several factors contributed to the ease of online transition: (1) motivated care providers including a part-time online navigator, (2) sequential presentation of cases, (3) institutional Zoom account for securing data privacy, and (4) availability of picture archiving and communication system (PACS) for neuroimaging. Challenges included: (1) delays due to internet connectivity, (2) Zoom fatigue and online distractions, and (3) lack of in-person communication or misunderstanding. Commitment of the entire neuro-oncology team is essential to ensure the delivery of best possible care for pediatric patients with CNS tumors.

**LINC-16. FACTORS ASSOCIATED WITH DELAYED DIAGNOSIS AMONG FILIPINO PEDIATRIC BRAIN TUMOR PATIENTS: A RETROSPECTIVE REVIEW**

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**BACKGROUND:** Delayed diagnosis is observed greatest among pediatric brain tumors compared to other childhood malignancies. Several factors have been found to influence delay. **OBJECTIVE:** To determine delayed diagnosis measured by the prediagnostic symptomatic interval (PSI) among Filipino pediatric brain tumor patients and identify associated factors. **METHODS:** Data was collected retrospectively on pediatric brain tumor patients of Philippine General Hospital from 2015-2019. PSI was calculated. Demographic and clinical data were presented using descriptive statistics. Bivaraiate and linear regression analyses were used to determine factors. **RESULTS:** The median interval from symptom onset to first physician consult was 22 days. The median interval from first consult to subspecialty referral was 23.5 days. Majority presented with 2 symptoms at onset (42.3%) and during first physician consult (48.6%), upon subspecialty consult (52.1%), and diagnosis (68.4%) consulted with a pediatrician. Most were diagnosed with another condition prior to brain tumor diagnosis. Longer PSI was significantly associated with older age (p=0.005), tumor location (p=0.009), tumor grade (p<0.001), and more physicians consulted prior to subspecialty referral (p=0.001). Significant predictors of delayed diagnosis were supratentorial...
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tumors (4-month delay, p=0.014), and those presenting with seizures (11-month delay, p=0.002), poor school performance (1-year delay, p=0.008), behavioral changes (1.3-year delay, p=0.033), and secondary amenorrhea (13.6-year delay, p=0.031). Predictors of early missing data included posterior fossa tumors (p=0.041), malignant tumors (p=0.002), and vomiting (p=0.020). CONCLUSION: Delayed diagnosis among Filipino brain tumor patients is associated with age, tumor characteristics and symptoms, which may increase in this condition. This emphasizes the need for first-contact physicians to be aware about these symptoms, and keep a diagnosis of brain tumor as a differential. This, coupled with a detailed history, accurate neurologi examination and early subspecialist referral may lead to earlier diagnosis and treatment for pediatric brain tumor patients.

**LINC-17. A SINGLE CENTER RETROSPECTIVE ANALYSIS OF PEDIATRIC INTRACRANIAL CHOROID PLEXUS CARCINOMA IN THE PHILIPPINES**

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**OBJECTIVE:** To explore the clinical characteristics and outcome in children with intracranial choroid plexus carcinoma in Beijing. **Methods:** We retrospectively analyzed 13 children with pathologically confirmed diagnosis of choroid plexus carcinoma between January 2017 and December 2021. All cases were diagnosed with surgical oncology consult. **RESULTS:** Male/female ratio=0.625(5:8). The median age at diagnosis was 1.2 years (range, 6 months to 9.8 years) with 9 cases < 3 years of age. Gross total resection was achieved in 12 cases (92.3%), and subtotal resection in 1 case. Seven patients received only adjuvant chemotherapy, according to CPT-SIOP 2009 protocol, and 6 patients underwent radiotherapy with combined chemotherapy. Six patients developed a recurrence, and 4 cases died at last follow-up. Among 9 patients alive, 7 cases attained CR, 1 PR and 1 SD. The 5-year progression-free survival (PFS) and overall survival (OS) were 64.8±14.3 % and (68.4 ± 13.1) % respectively. The survival of children treated under both irradiation and chemotherapy were higher than chemotherapy only (P=0.03). The cases < 3 years of age had worse survival than those > 3 years (P=0.05), and the 4 cases died were all younger than 3 years old. **CONCLUSIONS:** Choroid plexus carcinoma is a rare and malignant brain tumor, and affects mainly younger children in our center. Surgical resection is the mainstream treatment, and chemotherapy with combined chemotherapy and patients older than 3 years old tend to have better survival. **KEYWORDS:** Choroid plexus carcinoma; Therapy; Survival.

**LINC-18. CHALLENGES IN THE NEUROSURGICAL CARE OF PEDIATRIC PATIENTS WITH CENTRAL NERVOUS SYSTEM TUMORS DURING THE COVID-19 PANDEMIC**

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**INTRODUCTION:** Unplanned reoperations and mortality within 30 days are important indicators when evaluating the quality of care provided by surgical systems. We reviewed these outcomes among children with primary central nervous system (CNS) tumors treated during the COVID-19 pandemic. **METHODOLOGY:** This is a retrospective audit of a prospectively maintained neurosurgical database from January 2007 to December 2021. All pediatric cases (< 18 years) operated by the neurosurgery department during the study period were included for analysis. **RESULTS:** 668 patients underwent oncologic surgical procedures. There was a male preponderance (60.5%) and 35% of children were in the age group of 5-11 years. Hospital received maximum referral from the central and south of the country, wherein brain centers are located mostly in urban areas. **CONCLUSION:** This study is one of the largest single institute retrospective analysis of pediatric brain tumours demonstrating trends in the demographic, surgical and pathological variables over 15 years and the observed pattern is similar to published literature from Indian subcontinent.