February 2019 as a result of merging of all pediatric oncology units in the country. Among the 11 practicing pediatric hematologist/oncologists no one is dedicated specifically to PBTs. Since September 2017 we have started discussing all PBT cases (up to now 18 cases) through the telemedicine with St. Jude Children's Research Hospital (SJCRH). In Sept 2019 neuro-oncology multidisciplinary team was created with the involvement of local and foreign specialists. On a weekly basis the multidisciplinary team discusses all new and problematic cases. The team also concentrates on adaptation of diagnostic and treatment guidelines for pediatric CNS tumors, creation of educational materials for different stakeholders, and identification of current problems and their possible solutions. CONCLUSION: To the best of our knowledge this is the first report summarizing the current state of pediatric neuro-oncology in Armenia.

LINC-14. TREATMENT OF PEDIATRIC CNS TUMORS IN ARMENIA. 10 YEARS OF EXPERIENCE IN A 29 YEARS OLD RESOURCE-LIMITED SETTING

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BACKGROUND: Pediatric CNS tumors are the most common solid childhood malignancies with many challenges facing optimal outcome due to multimodality complex therapies, abandonment, and long-term morbidity. In our three-decades young, country the field of neuro-oncology is in its infancy. MATERIALS: The aim of our study is to assess incidence, epidemiology and treatment outcomes of children diagnosed and treated with CNS tumors within the last 10 years (2009–2019) in the Chemotherapy Clinic of "Muratsan" Hospital Complex of Yerevan State Medical University. RESULTS: During these periods 20 patients with CNS tumors were treated in our clinic. 13 patients (65%) were diagnosed with medulloblastoma (2 patients were infants), two patients (10%) with optic pathway glioma, and 5 patients each with pilocytic astrocytoma, ATRT, ETANTR, DIPG, and glioblastoma. Five patients (3 patients with medulloblastoma, 1 patient with pilocytic astrocytoma, 1 patient with ATRT) had metastatic disease at the time of diagnosis. Seventeen patients (80%) had undergone surgery, 8 patients with medulloblastoma received chemo-RT with vincristine. Median follow up time was 15.5 months (range 5–94). Twelve patients (60%) are alive without evidence of disease. 5 patients had disease progression and three patients relapsed. From them, 3 patients died. Long-term survivors are mainly standard risk medulloblastoma patients. All medulloblastoma patients were treated according to HIT-MED guidelines. CONCLUSION: Here we report about the pediatric brain tumors of one of the main pediatric oncology units in Armenia for a period of 10 years. The numbers are quite small for firm conclusions, but it shows the emerging need for further research.

LINC-15. OUTCOME OF CHINESE CHILDREN WITH MEDULLOBLASTOMA: A MULTI-CENTER EXPERIENCE WITH RISK-ADAPTED THERAPY

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BACKGROUND: Medulloblastoma is the commonest brain tumor in young children but literature on Chinese is scarce. We hereby present the outcome of children with medulloblastoma managed according to a risk- and age-stratified guideline from ten institutions across China. METHODS: Patients <18 years of age diagnosed with medulloblastoma between January 2016 and April 2019 were reviewed. Patients ≥3 years, stratified into average-risk (≤1.5cm^2 residual tumor, non-metastatic, non-anaplastic histology) and high-risk (others) groups, were treated with risk-adapted craniospinal irradiation (average-risk: 23.4Gy, high-risk: 36Gy), tumor boost, and chemotherapy (lomustine/cisplatin/vincristine). Patients <3 years (considered high-risk, other than patients with localized and desmoplastic/nodular histology) received chemotherapy (cyclophosphamide/vincristine, high-dose methotrexate, carboplatin/etoposide) with/without delayed irradiation. RESULTS: 112 patients were included with a median age at diagnosis of 6.5 years (range: 0.5–16.7). 16 patients (14.3%) had residual tumor >1.5cm^2 and 36 (32%) had metastasis. Available data on histological subtype (n=87) were classic in 56 (64%), desmoplastic/nodular or extensive nodularity in 23 (26%), and large cell/anaplastic in 8 (9%). Molecular subgrouping (n=55) assigned tumors as WNT-activated (n=8, 15%), SHH-activated (n=17, 31%), Group 3 (n=12, 22%) and Group 4 (n=18, 33%). Respective 2-year EFS/OS for patients ≥3 and <3 years were 86.0±4.0%/96.4±2.1% and 57.8±12.6%/81.4±9.8% (EFS/OS p<0.001/p=0.009). Significant difference in outcome was also observed between patients with average-risk and high-risk disease (EFS/OS p=0.006/p=0.018). CONCLUSION: We demonstrated feasibility in protocolizing the inter-disciplinary treatment for medulloblastoma in China. This will serve as a prototype for the standardization of pediatric neuro-oncology care in the country.

LINC-16. MEDULLOBLASTOMA IN A BOY WITH RUBINSTEIN-TAYBI SYNDROME: A CASE REPORT

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BACKGROUND: Rubinstein–Taybi syndrome (RTS) is characterized by multiple congenital anomalies and associated with mutations in CREBBP (70%) and EP300 (5–10%). Previous reports have suggested an increased incidence of benign and possibly also malignant tumors, but the correlation remains unclear. Here we present a case of a patient with RTS and medulloblastoma. CLINICAL CASE: A 5-year-old male presented with increased intracranial pressure. An MRI revealed a 4.2 x 4.7 cm mass in the midline of cerebellum arising from the floor of 4th ventricle. The patient underwent a complete resection and pathology revealed medulloblastoma, classic histology. Staging established no disseminated disease. At diagnosis, a peculiar phenotype consisting in mild mental retardation, microcephaly, down-slanting palpebral fissures, broad nasal bridge, highly arched palate, mild micrognathia, screwdriver incisors and wide thumbs and toes was noted. Clinical genetics evaluation was consistent with RTS. Karyotype was performed and normal. Further genetics testing was not done. Treatment consisted in 8 cycles of chemotherapy and craniospinal radiation (2300 cGy to spine, 5500 cGy Total). At the end of treatment, there was no evidence of disease. He was under surveillance for 33 months free of disease, but relapsed with a supratentorial meningeal disease that ultimately resulted in death. CONCLUSION: This report highlights the fact that pediatric medulloblastoma can be associated to RTS, in this case associated to classical histology and recurrent disease.

LINC-17. SIROLIMUS AS AN ALTERNATIVE TO SURGICAL RESECTION OF PEDIATRIC TUBEROUS SCLEROSIS COMPLEX-ASSOCIATED BILATERAL SUBEPENDYMAL GIANT CELL ASTROCYTOMAS: AN AFFORDABLE OPTION FOR PATIENTS FROM LOW-MIDDLE INCOME COUNTRIES

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Subependymal giant cell astrocytomas (SEGA) may lead to significant neurological morbidity in children diagnosed with tuberous sclerosis complex (TSC). Surgical resection is warranted for SEGAs demonstrating continuous growth, causing hydrocephalus and increased intracranial pressure. mTOR inhibitors (sirolimus and everolimus) are alternatives to surgery and have shown efficacy in stabilizing and shrinking SEGAs. Everolimus showed stronger evidence in efficacy, but its cost poses a limitation for this treatment among patients from low-middle income countries. We explored sirolimus as a potentially more cost-effective alternative in our setting. We present a 10-year-old Filipino child with TSC admitted due to headache, vomiting, and increased sleeping time. Neuroimaging revealed large bilateral SEGAs involving the frontal horns and foramina of Monro, causing moderate obstructive hydrocephalus. Surgical excision was offered, but parents opted for medical treatment. Bilateral posterior parietal ventriculoperitoneal shunts were inserted to decrease intracranial pressure. Due to the cost of everolimus, the patient was started on sirolimus at 1mg/m^2/day. Imaging done 6 months after initiating therapy demonstrated significant decrease in size of both SEGAs (right: 82.5%, left: 64.1%). Sirolimus levels were maintained at 15.7ng/ml and minimal elevations on cholesterol and triglyceride levels were observed and treated with simvastatin. Results of this case and review of related data suggest that sirolimus can be used as a conservative approach in inducing regression of large bilateral SEGAs, and an affordable alternative to everolimus for pediatric TSC patients from low-middle income countries. Prospective studies and clinical trials are needed to further establish its efficacy, safety and cost-effectiveness in our setting.

LINC-18. FOLLOW-UP EVALUATION OF A WEB-BASED PEDIATRIC BRAIN TUMOR BOARD IN LATIN AMERICA

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BACKGROUND: Since 2013, pediatric oncologists from Latin America have discussed neuro-oncology cases with experts from North America and Europe in a web-based "Latin American Tumor Board" (LATB). This descriptive study evaluates the feasibility of the recommendations rendered during the Board. METHODS: An electronic questionnaire was distributed to physicians who received recommendations between October 2017 and October 2018, two months after their case presentation on the LATB. Physicians were asked regarding the feasibility of each recommendation given during the Board. Baseline case characteristics of all presented cases were obtained from anonymized minutes prepared after the presentations. RESULTS: 36 physicians from 15 countries answered 103 of 142 questionnaires (72.5%), containing 283 recommendations. Physicians followed 60% of diagnostic procedural recommendations and 70% of therapeutic recommendations. Overall, 96% of respondents considered the recommendations applicable and useful. The most difficult recommendations to follow were genetic and molecular testing, pathology review, locally adapted chemotherapy protocols administration, neurosurgical interventions and access to molecular targeted therapies. The most cited reasons for not implementing the recommendations were lack of resources, inapplicable recommendations to that low-to-middle income country (LMIC) setting, and lack of parental consent. CONCLUSION: The recommendations given on the LATB are frequently applicable and helpful for physicians in LMIC. Nevertheless, limitations in availability of both diagnostic procedures and treatment modalities affected the feasibility of some recommendations. Virtual tumor boards offer physicians from LMIC access to real time, high-level subspecialist expertise and provide a valuable platform for information exchange among physicians worldwide.

LINC-19. CURRENT SITUATION OF PEDIATRIC TUMORS OF CENTRAL NERVOUS SYSTEM IN CHINA - THE FIRST CNOG NATIONAL WIDE REPORT

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Tumors of Central Nervous System (CNS) are most seen solid tumor in childhood. Accounting approximate 25–30% of pediatric neoplasms, treatments on these tumors are complicated as they occur in different age ranges, have various types according to classification system and contain different characteristic molecular profiles. There are huge gaps of medical services for children with CNS tumors in different regions in China, which is blamed to limited medical resources and lack of epidemiology data for Chinese population. After the establishment of CNOG (Children's Neuro-Oncology Group) in China in 2017, national wide registry (CNOG-MC001) was conducted to collect data on the basic information about pediatric tumors of CNS. Results of 4059 cases from 37 centers providing medical services for pediatric CNS tumors in 25 provinces from 6 greater administrative areas in China showed distinct tumor ratio, compared to worldwide data by WHO classification. The mean of age was 8.01 ± 4.73, with a male vs. female ratio as 1.48 to 1. Embryonal tumor, astrocytic & oligodendroglial tumors, and other astrocytic tumors were three most common tumor types in CNS of children. The lost follow-up rate was surprisingly high as 53.07%. In all, this is the first national wide registry for pediatric CNS tumor in China and the results attracted public and government's attentions for further epidemic investigations.

LINC-20. INFANT BRAIN TUMOURS IN HONG KONG

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OBJECTIVES: To review the clinical features, pathology and survivals of infants with brain tumours. METHODS: A retrospective review of the clinical findings, pathology, treatment and survival outcome in infants with brain tumours. RESULTS: From 1999 to 2018, there were 507 children (<18 years) who were diagnosed to have brain tumours in Hong Kong. The patients were treated in five public hospitals. The clinical data were collected by the Hong Kong Paediatric Haematology and Oncology Study Group, and were cross-checked with the data of the Hong Kong Cancer Registry. In this group of patients, there were 36 infants (birth to 365 days of age) i.e. 7.1% of the whole group. Both benign and malignant brain tumours were included, while non-neoplastic lesions were excluded. On average, there was 1.89 cases per year. The pathology of the tumours were astrocytoma (n= 8), medulloblastoma (n=6), germ cell tumour (n=6), PNET (n=5), ATRT (n=4), choroid plexus tumours (n=3), ependymoma (n=2), craniopharyngioma (n= 1) and ganglioglioma (n= 1). These infants were treated according to their clinical conditions and prognosis, with operation, chemotherapy or both. Radiotherapy was withheld or postponed to older age. Some patients only received palliative care due to the poor neurological status or prognosis. The overall survivals of children younger than 18 years old vs infants were 67.3% (±2.3) vs 50.5%(±9.2) respectively, while the event free survivals were 64.4% (±2.4) and 43.5% (±8.8) at 10-years respectively. CONCLUSION: Infants with brain tumours have different pathology and inferior outcome.

LINC-21. SURVEY ON THE RESOURCES AVAILABLE FOR PEDIATRIC NEURO-ONCOLOGY IN CHILE, SOUTH AMERICA

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BACKGROUND: We report the human and material resources available in Chilean institutions providing pediatric neuro-oncology services. METHODS: A cross-sectional survey was distributed to 17 hospitals providing pediatric neuro-oncology services (Programa Infantil Nacional de Drogas Antineoplásicas (PINDA) centers=11, Private=6). RESULTS: Response rate was 71% (PINDA=8; Private=4). Pediatric neuro-oncology services were mainly provided within general hospitals (67%). Registries for pediatric central nervous system (CNS) tumors and chemotherapy-related toxicities were available in 100% and 67% of centers, respectively. Children with CNS tumors were treated by pediatric oncologists in 92% of institutions; none were formally trained in neuro-oncology. The most utilized treatment protocols were the national PINDA protocols followed by the Children's Oncology Group protocols. All World Health Organization essential medicines for childhood cancer were available in more than 80% of participating institutions except for gemcitabine, oxaliplatin, paclitaxel, and procarbazine. The median number of pediatric neurosurgeons per institution was two (range,0–8). General neuro-radiologists were available in 83% of institutions. Pathology specimens were sent to pediatric neuropathologists (33%), neuropathologists (25%), adult pathologists (25%), and pediatric pathologists (16.7%). In-house pediatric radiation oncologists were available in 25% of centers. Intensity-modulated radiotherapy, conformal radiotherapy and cobalt radiotherapy were utilized by 67%, 58% and 42% of hospitals, respectively. Only one center performed autologous hematopoietic cell transplant for pediatric CNS tumors. CONCLUSIONS: These results provide a glimpse into the pediatric neuro-oncology services available in Chile. A wide range of up-to-date treatment modalities is available for children with CNS tumors in Chile. Establishing formal pediatric neuro-oncology training may be beneficial.

LINC-23. PRE-OPERATIVE AND POST-OPERATIVE INTERVENTIONS REDUCE RATES OF VENTRICULITIS IN PEDIATRIC BRAIN TUMOR PATIENTS: A PILOT STUDY

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BACKGROUND: The Philippine General Hospital, a public national referral center, sees 60–80 pediatric brain tumor cases per year. Historically, the rate of post-operative ventriculitis has been high, resulting in