was performed to measure the difference in the ADC between different histological subdiagnoses. Post Hoc method was used to test the significant difference between each two sub-diagnoses. Statistical analyses were performed using SPSS. RESULTS: There was a significant difference between ADC (P < 0.001). ADC values were significantly different between Low Grade Astrocytoma (1553.90 ± 251.21) (mean ± SD) and Medulloblastomas (684.90 ± 125.19) (P < 0.001). The study also demonstrated significant difference between Low Grade Astrocytomas and Ependymomas (1056.71 ± 183.67) (P < 0.05). However, there was no significant difference when comparing Medulloblastomas with Ependymomas (P > 0.05). CONCLUSION: In our sample, ADC showed partial significance when used to compare different histologies. These results, if proven in future studies with higher number of patients, are expected to be of great impact on preoperative diagnosis of brain tumors.

DV-03. INTEGRATING TREATMENT PROTOCOL MONITORING SYSTEM WITH REAL-TIME STATISTICS: A RESEARCH ORIENTED HOUSE DEVELOPED SOLUTION
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INTRODUCTION: At the Children’s Cancer Hospital Egypt (CCHE), each sub-type of pediatric oncology is managed through a disease management team. These teams provide essential components of comprehensive patient care. The complexity of care and the interdependence of different disciplines demanded CCHE to implement a hospital information system that served only the clinical needs. Monitoring of treatment protocols as well as real-time statistics were necessary to fulfill research needs. Managing research data while keeping a simple user friendly interface was a challenge and a motive to develop the monitoring solution. OBJECTIVES: The aim of the study was to assess the role of CCHE protocol monitoring system: ensuring that patients are accurately receiving their assigned protocols, monitoring and reducing protocol violations in addition to real-time data validation and statistical analysis. METHODS: The authors designed and deployed web applications that were hosted on the CCHE’s data center. The team took into consideration the HIPAA recommendations and the FDA - Code of Federal Regulations’ requirements. The system represents a collection of web-based subsystems, each tuned and customized to a specific pediatric oncology sub-type. RESULTS: The system allowed disease management teams and researchers to concurrently view, analyze and evaluate the standard treatment protocol milestones. Moreover, the system facilitated the interactions between the disease management team members by providing ease of access to the patient data from any terminal including hand held devices or smart phones. CONCLUSIONS: The solution allowed accessibility to researchers’ friendly views of patients’ data. Being developed “In-House”, the system was cost effective and tailored to CCHE’s needs. The capacity building and experience gained by our development team also worth mentioning. We recommend using web based settings, with the advantages of mobility, ease of accessibility and maintenance. The developed system can be easily applied in the course of management of other chronic diseases.

DV-04. THALAMIC GLIOMAS IN PEDIATRIC PATIENTS: ANALYSIS OF 28 CASES TREATED AT THE CHILDREN’S CANCER HOSPITAL EGYPT 57357
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Thalamic gliomas are rare tumors of the central nervous system. Their outcome is relatively poor because of the involvement of thalamic nuclei and their inaccessible surgical excision. While the role of radiotherapy and chemotherapy is questionable, best results are usually obtained when surgical excision is performed. The purpose of this study was to report their clinical and pathological characteristics and treatment outcomes. In our study, 28 patients (M 15, F 13; ranging from 1-17 years old) with radiologically diagnosed tumors in the thalamic region, treated from July 2007 until December 2010 at the Children’s Cancer Hospital Egypt 57357, were retrospectively reviewed and analysed in order to report their clinical and pathological characteristics and treatment outcomes. Initial common manifestations included impaired sensory and/or motor functions in addition to signs and symptoms of increased intracranial pressure. The initial common manifestation for each case was not consistent. A total of 15 cases were pilocytic astrocytoma in 7 patients, fibrillary astrocytoma in 9, other low grade glial tumors in 4 cases, anaplastic astrocytoma in 3 and glioblastoma multiforme in 2. Surgical interventions included tumor debulking in 6 patients and stereotactic biopsy in 19 patients. The initial treatment was surgery alone in 5 patients, surgery followed by radiotherapy in 4, surgery followed...
by chemotherapy and radiation therapy in 6, surgery followed by chemotherapy in 10 and chemotherapy alone in 3 patients. The 3-year overall survival for all patients was 69.9% but was related to the histological type: The rate was 78.9% for patients with low grade astrocytoma compared to 0% for those with high-grade astrocytoma. Thalamic glial tumors comprise a heterogenous group of tumors in terms of clinical behaviour and histopathological features. The poor overall results, especially in high grade tumors, demand continued research in the management of these tumors.

DV-07. CENTRAL NERVOUS SYSTEM TUMORS IN CHILDREN OF NORTHERN EGYPT
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BACKGROUND: There is limited data on brain tumors in Egypt and none from Alexandria. We initiated dedicated pediatric oncology service so we had to have baseline data before launching. METHODS: A retrospective study of children and adolescents <20 years with biopsy proven primary malignant CNS tumor attending to (ASM) from Alexandria and 3 governorates of Northern Egypt during January 1999-December 2009, were stratified regards demographics, histopathology, radiology, treatment and outcome data. RESULTS: Total number of cases diagnosed with CNS tumors was 184 accounting for 2.4% of the total number of pediatric non-leukemia cases seen in the same period of time. Most common presentation was by hydrocephalus (n = 40) followed by seizures (n = 24), changes in behavior (n = 8), endocrinal disturbances (n = 8), CT scan was the most radiological tool used (n = 48), MRI (n = 32) and MR spectroscopy (n = 8). The mean age was 10.2 and male: female ratio was 1:1, histopathologically low grade gliomas (n = 22), high grade gliomas (n = 5), ependymoma (n = 9), PNET (n = 3), craniopharyngioma (n = 4), optic glioma (n = 3), medulloblastoma (n = 30), most tumors were treated with chemotherapy (n = 40) and radiation (n = 40) and chemotherapy (n = 8). Complications reported after treatment were cognitive dysfunction (n = 40), endocrinal disturbances (n = 24). Follow up period mean 49.01 months, 23 cases were dead, 10 cases were lost to follow up and 33 cases were alive after the end of follow up period. The overall major morbidity (n = 5) which results to 50%, 5 patients in- evaluable. CONCLUSION: In 2010 we have seen 34 cases of CNS tumors, so establishment of a dedicated pediatric service.

DV-08. 62 CASES OF CHILDHOOD INTRACRANIAL LESIONS ON CT/ MR IMAGING: A RETROSPECTIVE SUMMARY OF SINGLE CENTER
Hao Xiong, Jianbo Shao, Jianxin Li, and Zuguo Xu; Wuhan Children's Hospital, Wuhan, Hubei, China

From 2010/10/01 to 2012/01/31, 62 pediatric patients had been diagnosed intracranial lesions on CT/ MR scan in Wuhan Children's Hospital. The median age was 30 months (1~180 months), the ratio of male to female was 1.38 (38:24). The most three predilection sites were posterior fossa(13 cases), saddle area(11 cases) and brainstem(7 cases). The most three suspected neoplasms on imagings were ependymoma (8 cases), glioma (8 cases) and eustachian tube tumor (6 cases). The pathology reports were difficult to provide for the majority of patients had been in critical condition and missed the suitable period of surgery when admitted. In the future we should take a high premium on the early diagnosis and comprehensive therapy, including surgery, chemotherapy, radiology and functional reconstruction, on childhood intracranial lesions so as to improve their long-term survival.

DV-09. INCIDENCE OF CHILDHOOD BRAIN TUMORS IN ALGERIA
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BACKGROUND: Brain tumors are the most common disease group of solid tumors in childhood; however, no epidemiologic data were available for Algerian population. The objective of this study was to estimate the incidence of childhood brain tumors in Algeria. METHODS: Data from all Algerian public neurosurgical and pediatric oncology departments were collected. The median age of children with newly diagnosed brain tumors in Algeria are compared with those of other countries, as published by the International Agency for Research on Cancer. RESULTS: A total of 226 children with newly diagnosed brain tumors (excluding intracranial and intraspinal germ cell tumors). The incidence rates are per 100,000 children and lies between the rates from other countries, which range between 1.7 and 4.1 per 100,000 children.

The most common brain tumors were astrocytomas (30.1%), medulloblastomas (22.7%), craniopharyngiomas (8.4%), ependymomas (7.1%), and supratentorial primitive neuroectodermal tumors (PNETs; 4%). They were
INTRODUCTION: As Central Nervous System tumors account for second most common childhood malignancies, improving treatment modalities can lead to increase the survival rate of patients. The epidemiological investigations make a large-scale database of analysis for prognostic features filled for each individual. Data analyzed by SPSS version 19 with Kolmogorov-Smirnov and Chi square tests. RESULTS: Out of enrolled patients 125(63.1%) male and 73(36.9%) female, had the mean age of 6.11 ± 3.65 years old. Tumors located in supratentorial (N = 60, 30.3%), infratentorial (N = 134, 67.7%) and spinal (N = 4, 2%). High-grade glioma and medulloblastoma were the most tumors in supratentorial and infratentorial locations respectively. The majority of patient's stage in medulloblastoma group was T3M0 (N = 44, 22.2%). The most clinical findings were vomiting, headache and impaired vision respectively. Thirty-one (15.7%) patients had relapse. there were 76(38.4%) off treatment and 82 (41.4%) death. The five years survival rate was 36%. CONCLUSION: According to the similar previously studies, the epidemiological features are same but the survival rate in this investigation was lower. Therefore, cautious interpretation in the future's investigations is undesirable. Brain tumor-based approach can lead to determine better treatment modalities for increasing cancer burden in pediatric malignancies.

DV-10. THE EPIDEMIOLOGY OF CHILDHOOD BRAIN TUMORS AT MAHAK PEDIATRIC CANCER TREATMENT AND RESEARCH CENTER (MPCTRC), TEHRAN, IRAN
Mohammad Faranoush1, Azam Mehrvai2, Amir Abbas Hedayati Asl3, Maryam Tashvighi3, Reza Ravan Parsa3, Mohammad Ali Fazeli3, Behzad Sobol4, Nima Mehr8, Mohammad Ali5, Rozhaneh Zangooei4, Mardawej Alebeouby4, and Parvaneh Vossough2; 1 MAHAK Pediatric Cancer Treatment and Research Center, Tehran, Iran; 2Islamic Azad University, Tehran, Iran

DV-11. 15 YEARS OF PEDIATRIC NEURO-ONCOLOGY IN POLAND
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INTRODUCTION: The first Pediatric Neuro-Oncology Program in Poland was developed in 1996. Before that time majority of children with CNS tumors were treated by adult neurosurgeons/radiotherapists and chemotherapy was not commonly recognized as a treatment option. There was in complete data concerning epidemiology/results of these entities in children. AIM: We are presenting our experience in developing the program and the results of the 15 years of its functioning. METHODS: The following steps were undertaken; retrospective analysis of children with CNS tumors from our center treated before 1996 was performed to serve as a reference since it was a pediatric center treating children with brain tumors, protocols for specific tumors (adapted from SIOP or own) were prepared and implemented in 10 pediatric oncology centers. In each center a multidisciplinary team (pediatric oncologist, radiotherapist, neurosurgeon, pathologist, radiologist) were formed. All tumors had to be verified by central pathology review, interdisciplinary consults at our center were available for all patients diagnosed with CNS tumor. Neurological computer data collection of primary CNS tumors was initiated in 2002. Concurrently studies on the role of imaging techniques (MRI spectroscopy, DWI, PWI) and researches on molecular biology of CNS tumors are being conducted. Quality of life of patients is being explored. RESULTS: Since 2002 1735 patients were registered. LGG were the most common (42.8%), followed by MB/PIPET - 38.2 HGG -26.2%, Anaplastic Ependymoma-88%, GCT-90.4%, NOSCT-55%, CPC-58%, ATRT-23.5%, brain stem - 7.3%, Ependymoma 6.6%, GCT-3.4%. Interdisciplinary approach and unified treatment protocols resulted in the following 5 yrs OS survival; LGG - 95.2%, MB/PIPET-38.2 HGG-26.2%, Anaplastic Ependymoma-88%, GCT-90.4%, NOSCT-55%, CPC-58%, ATRT-23.5%, brain stem 18.2%. All of these results are superior to those obtained before 1996. This program has also instituted close and constant cooperation with its national participants. Supported by The National Centre for Research and Development.

DV-12. TURNING INTERDISCIPLINARY BRAIN TUMOR SCIENCE INTO SURVIVAL; REPORT FROM THE NEURO-ONCOLOGY SCIENTIFIC CLUB OPENING SESSION - NOVOC 2012 - 19 JANUARY- TEHRAN, IRAN
Foad Ahmadzadeh Tahbaz1, Alireza Nikooosfar2, Mohammad Nikooosfar2, Homayoun Hadizadeh Kharazi3, Mojtaba Ghadyani4, Pedram Fadavif, Larisa Mukhomorova5, Mohammad Faranoush1, and Mohammad Torabi Nami6; on behalf of the NOVOC faculty and collaborators-Tehran 2012; 1Radiation Oncologist, Tehran University of Medical Sciences (TUMS), Tehran, Iran; 2Neurosurgeon, Shahid Beheshti Medical University (SBMU), Tehran, Iran; 3Radiation Oncologist, SBMU, Medical Oncologist, TUMS, Tehran, Iran; 4Medical Oncologist, SBMU, Tehran, Iran; 5Pediatric Oncologist, Mahak Children’s Hospital, Tehran, Iran; 6Radiologist, TUMS, Tehran, Iran; 7Behestan Group/MSD, Tehran, Iran

On the 19th January 2012, the opening session of the interval meetings of the Neuro-OncoScience Scientific Club (NOVOC-TSHN) was held. In this NOVOC 2012 is newly established scientific forum which has currently formed provincial steering boards in the country and is expected to be turned to the national NOVOC in its future perspective. The interdisciplinary nature of this club provides a multifaceted approach for diagnosis, treatment and follow-up of brain tumor patients. Participants from disciplines like radiation oncology, neurosurgery, radiology, adult and pediatric hematology and oncology and neurology utilized this transparent and unbiased round table to contribute to discussions and decisions. All comments were open to debate, with interdisciplinary team work for brain tumor patients' health and quality of life at the center. This report summarizes the communicated insights (neurosurgery, radiodiagnosis and radiochemotherapy) and the suggested strategies during the first NOVOC-Tehran meeting re-emphasizing the significance of the interdisciplinary approach as a practical model in CNS tumor patients' care. The conclusive remarks of the forum were: a) utilizing this scientific club both for maximizing outcome in treatment of brain tumors and as a scholarly forum for fundamental and translational research planning and follow ups, b) fostering interdisciplinary team work through NOVOC interval meet ups to improve our adult and pediatric brain tumor patients' health and quality of life, c) further encouraging participation of expert physicians from all allied disciplines in adult and pediatric CNS malignancies, d) preparing to launch and utilize the National Iranian Brain Tumor Registry (NIBTR) in conformity with the quality standards of the national cancer registry, steered by the Iranian Ministry of Health and e) contributing to organized adult and pediatric brain tumor boards in Tehran, Iran.

DV-13. OUTCOME OF CHILDHOOD CNS TUMOR: 8 YEARS EXPERIENCE OF SINGLE CENTER IN NORTHEAST OF BRAZIL
Ivana Botelho1, Francisco Pedroso1, Ibrahim Qaddoumi2, Raul Ribeiro2, Arli Pedrosa2, Adriano Hazim3, Geraldo Furtado4, Suzana Serra5, and Suzane Medicina1; 1Instituto de Medicina Integral Prof. Fernando Figueira, Recife, Pernambuco, Brazil; 2St. Jude Research Hospital, Memphis, TN, USA

BACKGROUND AND OBJECTIVES: Twining and telemedicine between the Instituto de Medicina Integral Prof. Fernando Figueira (IMIP)
and the International Outreach Program (IOP) at St. Jude Children’s Research Hospital positively impacted outcome of different cancers. Recently, a multidisciplinary team for brain tumors at IMIP was developed, and the approach on outcome on brain tumors at IMIP. METHODS: A retrospective review of all children less than 18 years of age with central nervous system (CNS) tumors from January 2003 till December 2011 was conducted. We collected demographic, clinical, radiologic, pathologic, treatment and outcome data. RESULTS: 180 children (93 boys, 87 girls) were diagnosed with brain tumor and treated at the IMIP. The median age at diagnosis was 7.1 years (range, 0.1 to 16.3 years). The most common diagnosis was astrocytoma (58 patients (32%), followed by brain stem gliomas 25 patients (14%), medulloblastoma 23 patients (13%), ependymoma 19 patients (11%), and 5 patients (30%) patients received other histological diagnosis. The diagnosis of brain stem glioma was based on radiologic and clinical findings. The estimated 5-year overall survival for all patients was 60% (+/-5%), Forty-three patients (24%) died of progressive disease, and 9 (5%) due to toxicity. The 5, 8 and 10 years overall survival for patients of DNT were observed in 8 out of 10 patients with glial tumours and 3 out of 6 patients with supratentorial tumours in children should be safe total resection, as a significant number of patients underwent two cycles of high dose chemotherapy and two patients had one cycle. Median CD34 cell dose collected was 10 X10^6/kg. Median CD34 cell dose infused was 3.67 X10^6/kg. All patients successfully engrafted. Median time to neutrophil engraftment was 14 days. Median time to platelet engraftment was 17 days. There was no transplant related mortality. Three patients died due to disease progression (2/3 received radiotherapy). Two patients are alive with no evidence of progression; both received focal radiation. Progression free survival was 60% at 1 year and 30% at 18 months from diagnosis. Median follow up time was 36 months.

CONCLUSION: High dose chemotherapy with stem cell rescue can be safely performed in young children with brain tumors. Poor outcome in our series is related to the aggressive nature of primary tumors and probably the presence of residual disease at the time of transplant.

**DV-14. SUPRATENTORIAL NEOUROGLIAL TUMOURS OF CHILDHOOD: A RETROSPECTIVE ANALYSIS OF OUTCOMES**

Ashok Pillai, Bindu Mr, and Dilip Panikar; Amrita Institute of Medical Science, Kochi, Kerala, India

The outcome of childhood supratentorial neuroglial tumours is not as well described as for other childhood brain tumours. We present a location-based retrospective analysis of supratentorial tumours during a 10 year period. METHODS: Ninety-nine children underwent surgery for supratentorial tumours at this institution during the period 2000 - 2010. There were 29 'lobar' neuroglial tumours and 17 deep hemispheric (thalamic/basal ganglia) tumours. All lobar tumours underwent craniotomy and excision. Total excision, judged by postoperative imaging, was possible in 21 (70%) and subtotal excision in 8 (30%). Amongst the deep hemispheric tumours, eight underwent stereotactic biopsy, seven subtotal excision and one total excision. RESULTS: The mean age was 8.5 yrs (±3.7 yrs). For lobar tumours and 10.6 ± 3.7 yrs for deep hemispheric tumours. There were seven ependymomas, three pilocytic astrocytomas, two pleomorphic xanthoastrocytomas, two desmoplastic infantile astrocytomas/gangliogliomas, one diffuse fibrillary astrocytoma, two anaplastic astrocytoma/glioneuronal cerebi, one gngloblastoma, one astroblastoma, two oligoastrocytomas, four dysembryoplastic neuroepithelial tumours, and four gangliogliomas. Of the WHO grade 3 & 4 tumours, 7 were alive and well without radiological progression at a mean most recent follow-up of 48 ± 23 months, 4 expired within 18 months and 2 were lost to follow-up. The WHO grade II tumours consisted of fourteen astrocytic tumours (WHO grade I - 1, grade II - 8, grade III - 2, grade IV - 3) and two oligodendrogial tumours. Amongst the patients with long-term follow-up data, persistent seizures were observed in 8 out of 10 patients with glial tumours and 3 out of 4 patients of DNT/ganglioglioma. CONCLUSION: The goal of surgery for supratentorial tumours in children should be safe total resection, as a significant number of patients were generally, being less amenable to resection and poorly responsive to adjuvant therapies.

**DV-15. HIGH DOSE CHEMOTHERAPY WITH AUTOLOGOUS STEM CELL RESCUE IN CHILDREN LESS THAN THREE YEARS OF AGE WITH BRAIN TUMORS: KING ABDULAZIZ MEDICAL CITY EXPERIENCE**

Mohammad Jarrar1, Musa Alharbi2, Talal Alharbi1, Reem Alsudairy1, Mohammad Jarrar1, Musa Alharbi2, Talal Alharbi1, Reem Alsudairy1, Mohammad Jarrar1, Musa Alharbi2, Talal Alharbi1, Reem Alsudairy1; King Abdulaziz Medical City, Riyadh, Saudi Arabia; 2King Fahad Medical City, Riyadh, Saudi Arabia; 3King Saud University, Riyadh, Saudi Arabia

BACKGROUND: High dose chemotherapy with autologous stem cell rescue have been utilized in young children with brain tumors to avoid or delay the use of radiation. METHODS: We retrospectively reviewed medical records of 5 patients with malignant brain tumors who underwent high dose chemotherapy and stem cell rescue at King Abdulaziz Medical City. All patients underwent initial surgical resection. RESULTS: One patient with midline lesion and he succumbed 5 months after diagnosis. DISCUSSION: In this case, the clinical presentations and behavior of the tumor is consistent with high grade glioma, with the patient succumbing 5 months after diagnosis. OJEC Chemotherapy was started. Final histopathology report from Singapore was consistent with the diagnosis of ATRT, with inactivation of INI-1. After second cycle of chemotherapy, the boys’ condition had not improved significantly and CT showed residual tumor slightly larger in size. Hence, treatment was switched to VETOPEC regime (Vincristine/ Etoposide/Cyclophosphamide). Three cycles of VETOPEC were completed and the tumor seemed to respond to chemotherapy with clinical and radiological improvement. After the 3rd cycle, unfortunately the patient got febrile neutropenia, persistently raised ICP despite cerebral decongestants and he succumb 5 months after diagnosis. DISCUSSION: In this case, the clinical presentations and behavior of the tumor is consistent with high-grade glioma. This case report shows the importance of early diagnosis and treatment. High dose chemotherapy and radiotherapy is unavailable in our hospital setting. The case was only started with VETOPEC regimen which is for any unknown solid tumor treatment without cranial RT nor intrathecal chemotherapy. In this case, with surgery and conventional chemotherapy only, the boy survived for 5 months. CONCLUSION: Atypical teratoid rhabdoid tumor is a rare and difficult to treat tumor in resource limited countries. We would like to share our experience in the first case of ATRT and difficulty in management of ATRT in our center.

**DV-16. ATYPICAL TERATOID Rhabdoid tumor (ATRT) FROM YANGON CHILDREN HOSPITAL, MYANMAR: A CASE REPORT**

Tint Myo Hnin, AyeAye Khaing, and Htay Htay Tin; Yangon Children’s Hospital, Yangon, Myanmar

BACKGROUND: Atypical teratoid rhabdoid tumor is a rare tumor. This is the first reported case in pediatric hematono-cancer in Myanmar. CASE: One-year-old boy presented with acute onset of low-grade-fever, projectile vomiting abnormal eye movement and generalized tonic-clonic convulsions. CT scan showed a 3.5 x 4.5cm lesion in the left cerebellum with moderate hydrocephalus. A ventriculoperitoneal shunt was inserted and surgical excision was performed. Histology showed a small blue round cell tumor. NSE and S100 were weakly positive with negative LCA. The appearance was compatible with neuroblastoma or medulloblastoma. Postoperatively, the boy’s condition deteriorated. Urgent CT revealed large recurrent pan-tumor (ATRT). OJEC Chemotherapy was started. Final histopathology report from Singapore was consistent with the diagnosis of ATRT, with inactivation of INI-1. After second cycle of chemotherapy, the boys’ condition had not improved significantly and CT showed residual tumor slightly larger in size. Hence, treatment was switched to VETOPEC regime (Vincristine/ Etoposide/Cyclophosphamide). Three cycles of VETOPEC were completed and the tumor seemed to respond to chemotherapy with clinical and radiological improvement. After the 3rd cycle, unfortunately the patient got febrile neutropenia, persistently raised ICP despite cerebral decongestants and he succumb 5 months after diagnosis. DISCUSSION: In this case, the clinical presentations and behavior of the tumor is consistent with high-grade glioma. This case report shows the importance of early diagnosis and treatment. High dose chemotherapy and radiotherapy is unavailable in our hospital setting. The case was only started with VETOPEC regimen which is for any unknown solid tumor treatment without cranial RT nor intrathecal chemotherapy. In this case, with surgery and conventional chemotherapy only, the boy survived for 5 months. CONCLUSION: Atypical teratoid rhabdoid tumor is a rare and difficult to treat tumor in resource limited countries. We would like to share our experience in the first case of ATRT and difficulty in management of ATRT in our center.

**DV-17. A RETROSPECTIVE STUDY OF 123 PEDIATRIC BRAIN TUMORS PATIENTS IN AN EGYPTIAN INSTITUTE**

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BACKGROUND: Central nervous system tumors comprise 15% to 20% of all malignancies occurring in childhood and adolescence. There is a little population based data on their incidence at a national level. We aim to describe the incidence and outcome of childhood primary brain tumors in one of the biggest ministry of health centers (Nasser Institute).

METHODS AND METHODS: It is a retrospective study on patients under the age of 16, presenting at Nasser Institute with primary brain tumors between 1999 and 2011. Clinical history, biopsy reports, operative reports of patients were analyzed, as well as: age, sex, histology, treatment and overall survival. RESULTS: One hundred and twenty three patients were diagnosed with primary brain tumors during the period of study.
65 males and 58 females with a male-female ratio 1.12:1; median age 7 years (0.25-16); mean age 7.48 years; median follow-up 14 months. The main histological type was medulloblastoma (39.8%), followed by low grade astrocytoma (23.6%), gliomas with brain stem involvement (13%), ependymomas (12.2%), glioblastomas (4.1%), PNET (3.3%), germ cell tumors (2.4%), optic nerve glioma (1.6%). Fourteen percent of the patients did not undergo any surgical intervention, whereas all the rest underwent incomplete surgical intervention. Eighty six percent of patients received radiotherapy and 87% received chemotherapy. The 5-year overall survival (OS) of the whole group was 46.4%. The 5-year disease free survival (DFS) for the whole group was 71.8%. Correlation of survival with prognostic factors showed a statistical significance difference to the following: medulloblastoma (p < 0.001), males (p = 0.005) and surgical intervention (p < 0.001).

CONCLUSION: Medulloblastoma is the most frequently encountered brain tumor in this study with the best 5-year overall survival. Histology, sex and surgical intervention are statistically significant prognostic factors in pediatric brain tumors in our institution.

DV-18. EPIDEMIOLOGY AND TREATMENT OUTCOME OF CHILDHOOD ASTROCYTOMAS: A SINGLE INSTITUTION 10-YEAR OF PEDIATRIC ONCOLOGY UNIT OF REBAGLUITI HOSPITAL IN LIMA, PERU
Ivan Maza, Liliana Vásquez, Katy Ordoñez, Gloria Paredes, Alejandro Ya´bar, Erika Ugarte, and Jenny Gerónimo; Edgardo Rebagluiti Martins Hospital, Lima, Peru

BACKGROUND: Astrocytoma (AS) is the most common type of brain tumors in children. These are heterogeneous tumors that vary in presentation, treatment and outcome. There is little information on AS in children in Peru. METHODS: We reviewed retrospectively the medical records of all children < 18 years old with AS for 10 years (2001-2010) treated at our hospital. We collected demographic, clinical, radiologic, pathologic, treatment and outcome data. RESULTS: Thirty four children with AS (16 boys and 18 girls) were diagnosed and treated at our hospital. Their median age was 10 years. The symptoms were headache (68%) and motor deficit (47%). Visual compromise was found in 26.4% and seizures were reported in 17.6%. The median time of presenting symptoms was 24.2 weeks. The tumor locations were: brain lobes (44.1%), cerebellum (26.4%), brainstem (5.9%), thalamus (11.8%), spinal cord (5.9%) and overlapping brain sites (5.8%). Hydrocephalus was present in 23 patients (67.6%). Only two patients had metastases (5.8%). Eight tumors were histologically classified as WHO grade 1 (23.5%), 17 as grade 2 (50%), 6 as grade 3 (17.6%) and 3 as grade 4 (8.8%). Tumor gross total resection is followed by radiotherapy. If complete resection is not possible, patients undergo chemotherapy and further surgical interventions. In average, the time from diagnosis to surgery was 2.1 weeks, and from surgery to radiotherapy was 9.1 weeks. Complete resection was achieved in only 9 patients (26.4%). Fourteen patients had two or more surgical interventions (41.2%). A ventriculoperitoneal shunting was required in 23 patients (67.6%). Twelve children (35.3%) survived with no evidence of disease, and 6 (17.6%) with evidence of disease. Twelve children (35.3%) died. The median follow-up was 54 months. CONCLUSIONS: Astrocytoma has high mortality in our hospital; this is likely due to late diagnosis, incomplete tumor resection and deficient supportive care. Targeted improvements in these areas may increase survival.