mortality was 12.5 percent (mean follow-up duration 5.46 years). Conclusions Data analysis is ongoing with plans to compare relevant patient demographics and outcomes, and to analyse questionnaires to elucidate how surgeons incorporate fMRI data into their therapeutic approach.

PC3 – 191

doi:10.1017/cjn.2016.387

Assessment of Preoperative Functional MRI Measurement of Language Lateralisation in Brain Tumour Patients

E. Kosteniuk[1], *J.C. Lau, J.F. Megyesi*
[1]*School of Medicine and Dentistry, University of Western Ontario, London, ON* skosteniuk2018@meds.uwo.ca

This study aims to evaluate reliability of clinical functional magnetic resonance imaging (fMRI) in identifying language lateralisation index (LI), verified with Edinburgh handedness inventory (EHI), in brain tumour patients. Methods In this retrospective study, 31 of a single surgeon's brain tumour patients over a 12 year period have been selected. Lesion type varied, 12 (39 percent) were high grade gliomas, 10 (32 percent) low grade gliomas, 3 (10 percent) meningiomas, and 6 (19 percent) other types. Patients underwent language fMRI paradigms for preoperative assessment, and a neuroimaging analyst was able to identify an LI value for at least one Brodmann area (BA). For each paradigm, a neuroimaging analyst attempted to calculate LI for Wernicke's area (BA 22) and Broca's area (BA 44 and 45). Results Of 113 total LI values, 66 (58 percent) were concordant to EHI-predicted hemispheric dominance. Reliability of language LI appears dependent upon the type of language task performed. Verb generation correctly identified Broca's area in 18 patients (64 percent) and Wernicke's area in 11 patients (61 percent), sentence completion correctly identified Broca's area in 18 patients (72 percent) and Wernicke's area in 9 patients (60 percent), and naming correctly identified Broca's area in 7 patients (47 percent) and Wernicke's area in 3 patients (27 percent). Conclusions Results show limited correlation between language LI determined by fMRI and EHI. The main limitation of this study is that language LI is being compared to EHI, rather than gold standard measure of hemispheric dominance (e.g. Wada).

OTHER CLINICAL

PC3 – 128

doi:10.1017/cjn.2016.388

Clinical Profile and Treatment Outcomes of Patients with Primary CNS Lymphoma in a Tertiary Hospital in the Philippines: An Eight-Year Retrospective Review

M.C. Concepcion Sales[1]
[1]*Philippine General Hospital, Manila, Philippines*
macarmelamd@yahoo.com

Primary CNS Lymphoma (PCNSL) is an unusual extranodal form of Non-Hodgkin's lymphoma with a locally aggressive course but a rare tendency to disseminate systemically. It has been documented in that the clinical characteristics and response to treatment among Asians is comparable to the Western population yet no studies done locally are available. Objectives: This study aims to determine the clinico-pathologic profile of patients diagnosed with PCNSL seen at Philippine General Hospital (PGH) from January 2006 to September, 2014 and to evaluate the patients' response to the following treatment modalities: 1) Combination chemotherapy 2) Chemo-RT 3) Single agent chemotherapy and 4) no specific anti-lymphoma treatment. Methodology: This is a descriptive and retrospective study that included all cases of histologically-proven PCNSL seen at the PGH from January 2006 to September, 2014. The clinical profile, imaging studies and biopsy findings were obtained from the patient records. The survival rates at the end of one and two years of diagnosis were computed. Results and Conclusion. Among patients diagnosed with PCNSL at PGH, there is a higher incidence of PCNSL among males with a male to female ratio of 1.4:1 and have a younger onset with a median age of 50.2 years. Most patients presented with signs of increase ICP and majority had solitary cortical lesions with histopathologic diagnosis of diffuse large B cell lymphoma. Patients who did not undergo any form of treatment had a mean survival of 10 months. Immunocompromised patients had a shorter life-span with a mean survival of 7.5 months. Treatment of combination chemotherapy with HD-MTX and Rituximab had the most favorable outcome followed by HD-MTX only with a 2 year survival rate of 100% and 66% respectively while patients who underwent chemo-RT had a 2 year survival rate of 33% with a high incidence of neurocognitive delay.

PC3 – 129

doi:10.1017/cjn.2016.389

Primary Intracranial Round Cell Sarcoma in an HIV Patient: A Case Report and a Review of Literature

M.C. Concepcion Sales[1]
[1]*Philippine General Hospital, Manila, Philippines*
macarmelamd@yahoo.com

Primary intracranial sarcoma among patients diagnosed with HIV is rare. Case reports published have shown that there is an increasing number of cases of leiomyosarcoma, hemangiopericytoma and rhabdomyosarcoma among these patients. Further, there are also few reports that sarcomas may present atypically, sometimes mimicking a brain abscess. We report a case of a 26 year old male, newly diagnosed HIV, who presented with bilateral chronic suppurative otitis media associated fever, headache and vomiting. Neuroimaging showed with multiple rim enhancing masses on the left temporal, parietal and occipital areas and bilaterally sclerosed mastoid air cells. Initial impression was an otogenic abscess. Burrhole craniotomy and evacuation of the cystic masses was done. Histopathologic examination revealed a small round blue cell sarcoma. Different immunostains were done to differentiate the various subtypes of sarcomas possible. Patient was discharged improved but did not consent to chemotherapy or radiotherapy.

PC3 – 130

doi:10.1017/cjn.2016.390

A Meta-Analysis on the use of High-Dose Methotrexate Only Versus Combination Chemotherapy for the Treatment of Newly-Diagnosed Patients with Primary CNS Lymphoma

M.C. Concepcion Sales[1]
[1]*Philippine General Hospital, Manila, Philippines*
macarmelamd@yahoo.com

Primary CNS Lymphoma (PCNSL) is an unusual extranodal form of Non-Hodgkin's Lymphoma with a locally aggressive course but a rare tendency to disseminate systemically. There are various modalities available for the treatment of PCNSL which include chemotherapy, radiotherapy, surgery and immunotherapy. The effectiveness of adding another anti-neoplastic agent to HD-MTX have been optimized in small scale studies yet the " perfect combination" has yet to be elucidated Objectives: This study aims to 1) compare the response to treatment of monotherapy with high-dose Methotrexate (HD-MTX) versus HD-MTX and an additional anti-neoplastic agent by evaluating complete response, partial response, stable disease and disease progression and 2) to compare the hematologic and non-hematologic side effects among patients subjected to monotherapy vs combination chemotherapy. Methodology: Journals from Medline, EMBASE, Cochrane Central Register of Control Trials (CENTRAL) and other relevant websites (www.clinicaltrials.org) without any restrictions in the year, language and status of publication were searched. Literatures cited by eligible studies and systemic reviews were also checked to identify useful articles. The following Medical Subject Headings (MeSH) were used: 'primary CNS lymphoma', 'treatment', 'chemotherapy' and 'randomized control trial'. Statistical analysis was performed using the RevMan software version 5.1. Odds ratio (OR) and 95 % confidence interval (95% CI) were used as summary statistics. Results and Conclusion: The use of high-dose methotrexate and another anti-neoplastic agent showed benefit in terms of achieving complete response and delaying disease progression among patients diagnosed with PCNSL. However, the risks of hematologic toxicities such as anemia, neutropenia, thrombocytopenia and infection was higher in patients treated with the combination chemotherapy. Significant non-hematologic side effects such as mucositis was also observed in patients receiving an add-on to high dose methotrexate.

PC3 – 138

doi:10.1017/cjn.2016.391

Stereotactic Radiosurgery for Intracranial Hemangiopericytomas – A Multicenter Study

O. Cohen-Inbar[1,2,3]
[1]*Department of Neurological Surgery, Rambam Health Care Center, Haifa Israel*
[2]*Molecular Immunology Laboratory, Technion Israel Institute of Technology*
[3]*Department of Neurosurgery and Gamma-Knife Center, University of Virginia, Charlottesville, Virginia*
oc2f@virginia.edu

Hemangiopericytomas (HPC) are widely recognized for their aggressive clinical behavior. We report a large multicenter study, through the International Gamma Knife Research Foundation reviewing management and outcome following stereotactic radiosurgery (SRS) for recurrent or newly-discovered HPC's. Methods: Eight centers participated, reviewing a total of 90 patients harboring 133 tumors. Prior treatments included embolization (n = 8), chemotherapy (n=2), and fractionated radiotherapy (n=34). The median tumor volume at the time of SRS was 4.9 ml (range 0.2-42.4 ml). WHO-grade II (typical) HPC's formed 78.9% (n=71) of the cohort. The median margin and maximal doses delivered were 15 Gy (2.8-24) and 32 Gy (8-51), respectively. The median clinical and radiographic follow-up period was 59 months (6-190) and 59 months (6-183), respectively. Results: At last follow-up, 55% of tumors and 62.2% of patients demonstrated local tumor control. New remote intracranial tumors were found in 27.8%. 24.4% of patients developed extra-cranial metastases. Adverse radiation effects were noted in 6.7%. The overall survival was 91.5%, 82.1%, 73.9%, 56.7%, and 53.7% at 2, 4, 6, 8, and 10 years, respectively, after initial SRS. Local progression free survival was 81.7%, 66.3%, 54.5%, 37.2%, and 25.5% at 2, 4, 6, 8, and 10 years, respectively, after initial SRS. In our cohort, 32 patients underwent 48 repeat SRS procedures for 76 lesions. Margin dose greater than 16 Gy (p=0.037) and tumor histology (p=0.006) were shown to influence PFS. Conclusions: SRS provides a reasonable rate of local tumor control and a low risk of adverse effects.

PC3 – 141

doi:10.1017/cjn.2016.392

Long-Term Results of Stereotactic Radiosurgery for Skull Base Meningiomas

O. Cohen-Inbar[1,2,3]
[1]*Department of Neurological Surgery, Rambam Health Care Center, Haifa Israel*
[2]*Molecular Immunology Laboratory, Technion Israel Institute of Technology*
[3]*Department of Neurosurgery and Gamma-Knife Center, University of Virginia, Charlottesville, Virginia*
oc2f@virginia.edu

Gamma knife radiosurgery (GKRS) is well-established in the management of inaccessible, recurrent, or residual benign skull base meningiomas. Most series report clinical outcome parameters and complications in the short -intermediate period after radiosurgery. Reports of long-term tumor control and neurological status are still lacking. Objective: We report the presentation, treatment, and long-term outcome of skull base meningiomas after GKRS. Methods: From a prospectively collected IRB approved database, we selected patients with a WHO grade I skull base meningioma treated with a single-session GKRS and a minimum of 60 months follow up. 135 patients, 54.1% males (n=73) form the cohort. Median age was 54 years (19-80). Median tumor volume was 4.7 cm3 (0.5-23). Median margin dose was 15 Gy (7.5-36). Median follow up was 102.5 months (60.1-235.4). Patient and tumor characteristics were assessed to determine predictors of neurological function and tumor progression. Results: At last follow up, tumor volume control was achieved in 88.1% (n=119). Post-GKRS clinical improvement or stability was reported in 61.5%. The 5, 10, and 15 years actuarial progression free survival rates are 100%, 95.4%, and 68.8%, respectively. Favorable outcome (both tumor control and clinical preservation/improvement) was attained in 60.8% (n=79). Pre-GKRS performance status (KPS) was shown to influence tumor progression (p=0.0001) and post-GKRS clinical improvement / preservation (p=0.003). Conclusion: GKRS offers a highly durable rate of tumor control for WHO-I skull base meningiomas, with an acceptably low incidence of neurological deficits. KPS at the time of radiosurgery serves as a reliable long-term predictor of overall outcome.