mandibular dystonia. Due to the various clinical presentations of paraneoplastic neurological syndromes also unusual combinations of neurological signs and symptoms should be considered as potentially paraneoplastic in the diagnostic work-up.

**P16 SUPPORTIVE AND PALLIATIVE CARE**

**P16.01 DUOXETINE IN CHEMOTHERAPY-INDUCED PERIPHERAL NEUROPATHY: EXPERIENCE BEYOND THE CLINICAL TRIAL.**

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**BACKGROUND:** Duloxetine, a serotonin-norepinephrine reuptake inhibitor, is the only agent demonstrated effective in treating pain related with chemotherapy-induced peripheral neuropathy (CIPN). The phase III randomized, double-blind, placebo-controlled trial published in 2013 showed a moderate effect of duloxetine on CIPN pain relief, becoming the drug of choice for CIPN treatment.

**METHODS:** Consecutive CIPN patients treated with duloxetine were prospectively collected in a single-institution, between September 2013 and December 2015. Aim of the study was to evaluate the drug's efficacy, rate of compliance and adverse effects profile. Only patients with chronic CIPN with positive symptoms (pain, numbness and/or paraesthesia) and non-progressive disease were included. CIPN was graded employing the Total Neuropathy Score (TNCs) and National Cancer Institute–Common Toxicity Criteria v4. Response to duloxetine was assessed with patient global impression of change (PGIC) scale (1: no benefit; 7: excellent response).

**RESULTS:** One hundred patients with symptomatic CIPN were consecutively treated with duloxetine. Median age was 62 (29–81), 58, 37, 2 and 2 received platinum, taxane, bortezomib and vincristine-based regimens, respectively, for colorectal (n=47), breast (n=30), gynecologic (n=6), germinal (n=5), and other (n=12) cancer. Median TNCs was 9 (1–17). Severity of neuropathy was grade 1 (20%), grade 2 (66%), and grade 3 (14%). Sixteen patients were on treatment with other agents against neuropathic pain. Median PGIC score was 3 (1–7). Among responders, 45.5% and 54.5% scored low (2–4) and high (5–7) benefit, respectively. Fifty-seven (57%) patients discontinued early duloxetine due to intolerable side effects (n=37) or lack of efficacy (n=20). No differences on rates of stop treatment due to side effects were observed in men (41%) and women (59%). Most frequently reported adverse events were cognitive (26%), gastrointestinal (14%) and genitourinary (9%). Discontinuation due to perception of lack of efficacy was more frequently reported by men (75%) vs 21% (p=0.005). PGIC scores were significantly higher in patients receiving taxane (3.8 ± 2.4) than platinum (2.5 ± 1.9) agents (p=0.027). No significant differences according severity of neuropathy neither type of chemotherapy were observed in drop-out and retention rates.

**CONCLUSION:** More than one-third of all patients early stop duloxetine due to intolerable side-effects, which is a rate three times higher than reported. Among treated, women population seems to experiment more benefit. The improvement experienced by patients responding to duloxetine was modest in half of them. Low tolerability and male gender limit duloxetine usefulness in treatment of symptomatic CIPN.

**P16.02 INTERNET-BASED GUIDED SELF-HELP FOR GLIOMA PATIENTS WITH DEPRESSIVE SYMPTOMS: A RANDOMIZED CONTROLLED TRIAL.**

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**INTRODUCTION:** Depressive symptoms are common in glioma patients, and can have negative consequences for their health-related quality of life (HRQOL). Evidence for the effectiveness of psychological treatment for depression in glioma is scarce, and the effectiveness of internet-based mental health care has not yet been explored in this population. Therefore, we performed a nation-wide randomized controlled trial to evaluate the effects of an internet-based, guided self-help intervention for depressive symptoms in glioma patients.

**MATERIALS AND METHODS:** An existing 5-week course based on problem solving therapy, originally developed to treat depression in the general population, was adapted for use by adult glioma patients with mild to moderate depressive symptoms (Center for Epidemiology Studies Depression Scale (CES-D) score ≥12) but without suicidal ideation (Beck Scale for Interpersonal Relationships score <5). Glioma patients were allowed to delay the intervention or to wait the list control group. Patients with hematologic cancer were recruited as a non-central nervous system (non-CNS) control group and also received the intervention, and were used to determine whether the effects of the intervention differed between patients with CNS and non-CNS tumors. Depressive symptoms (CES-D, fatigue, Checklist Individual Strength), and HRQOL (Short Form-36), were assessed by means of online questionnaires. Results from 6 and 12 weeks follow-up were analysed with intention-to-treat (ITT) and per protocol (PP) linear mixed models, corrected for outcome scores on baseline measures.

**RESULTS:** In total, 96 glioma patients (intervention group N=45, waiting list controls N=44) and 26 hematologic cancer patients were included. At follow-up, almost 60% of glioma patients (N=22 (6 weeks); N=33 (12 weeks)) and N=35 (6 weeks); N=38 (12 weeks) for the intervention and control group, respectively) and 54% (6 weeks) and 42% (12 weeks) of hematologic cancer patients completed assessments. We found no statistically significant changes over time for any outcome measure between the glioma intervention group and control group. However, there was a trend (p<0.10) towards decreased depression scores in the glioma intervention group versus the waiting list control group at 6 weeks (ITT: p=0.078, PP: p=0.082), but not at 12 weeks. There was also a trend towards decreased fatigue at 6 weeks (ITT: p=0.075, PP: p=0.088).

**CONCLUSIONS:** This is the first study to evaluate the effects of problem-solving therapy delivered through the internet as treatment for depressive symptoms in glioma patients. In this study with a small sample size and statistically significant non-significant results, we observed a trend with regard to depression, fatigue, or HRQOL. After the intervention, only a trend towards improved mood and fatigue was found for glioma patients randomized to the intervention group.

**P16.03 EFFICACY AND TOLERABILITY OF LACOSAMIDE IN PATIENTS WITH GLIOMA: FINAL RESULTS OF A MONO-INSTITUTIONAL PROSPECTIVE STUDY.**

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**BACKGROUND:** Lacosamide (LCM) has been suggested in few retrospective studies to improve seizure control as an add-on treatment in brain tumor patients, and this final result provides further evidence in a cohort of patients with low grade (LGG) and high grade gliomas (HGG) and medically intractable epilepsy who received LCM.

**PATIENTS AND METHODS:** Eligibility criteria were as follows: 1) biopsy-proven grade II or IV glioma or IV glioblastoma (WHO 2007); 2) persisting seizures (seizure frequency > 1 per month) despite a treatment with 1 or more antiepileptic drugs (AEDs) for at least 3 months and adequate serum concentration; 3) stable steroid dose; 4) available information on tumor response on MRI according to RANO criteria following chemotherapy or radiotherapy; 5) age > 18 years. LCM was given at 50 mg daily for one week with an increase of 50 mg twice daily every week to a target dose of 200–400 mg/day. The endpoints were >50% decrease of seizure frequency and seizure freedom at 6 and 9 months.

**RESULTS:** Since January 2012, 71 patients were evaluable. There were 26 grade II gliomas, 20 grade III and 25 glioblastomas. Eleven patients (15.5%) had generalized seizures and 32 (45.7%) partial seizures. Forty-four patients (61.8%) were on AED monotherapy while 27 (38.2%) on polytherapy. Reasons for introduction of LCM were lack of efficacy of previous AEDs associated with (46.5%) or without (53.5%) progressive disease on MRI or unacceptable side effects of traditional AEDs in 11 patients (15.5%). Median duration of follow up was 9 months (range 3–24 months).

Among LGG at 6 months from start of LCM 11/26 patients (42.3%) had a reduction of >50% of seizure frequency while seizure freedom was observed in 11/26 (42.3%); at 9 months a reduction of >50% of seizure frequency was observed in 27/28 (78.6%) while seizure freedom was obtained in other 13 (54.2%). Moreover, 11/26 patients (42.3%) at 6 months and 10/26 (38.5%) at 9 months were seizure responders respectively, without concurrent antiepileptic therapies. As for HGG at 6 months 10/39 patients (25.6%) had a reduction of >50% of seizures frequency while seizure freedom was obtained in 18/39 (46.1%); at 9 months a reduction of >50% of seizure frequency was observed in 7/32 (21.8%) and seizure freedom in other 17 (53.1%). A resolution of an epileptic status was obtained in 6 patients of whom one receiving LCM alone. Secondary generalized seizures disappeared in 14 patients. Two responding patients were able to reduce the
doses of previous AEDs. Most patients (87.3%) did not report significant toxicities: in 2 cases only LCM was withdrawn due to dizziness and fatigue and resistant epilepsy, respectively.

CONCLUSIONS: This is the first prospective study on patients with both LGG and HGG with LCM as an add-on treatment showing a significant activity, even regardless of tumor response to antineoplastic treatment. LCM did not have interactions with AEDs.

P16.04 EXPLORING SUPPORT NEEDS OF FAMILY CAREGIVERS FOR PATIENTS WITH PRIMARY MALIGNANT BRAIN TUMOR IN END OF LIFE

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BACKGROUND: Primary malignant brain tumor is not only life-threatening illness but also has neurological, physical, cognitive, behavioral, and emotional symptoms. This gives a challenging role of family caregivers. There are lots of researches which addressing these family caregivers in overseas but not in Japan. The support for family caregivers is influenced by social and cultural back ground. Therefore, to improve family caregivers’ outcome, it is essential to have own strategy as well as knowledge and implication from overseas. This study is a first step for a strategy, aimed to investigate family caregivers’ support needs during taking care of primary malignant brain tumor patients in end of life.

METHODS: Family caregivers, it has passed more than a half year and less than 3 years from the death of their loved one who had primary malign brain tumor were recruited from a neurological clinic. Interviews were conducted in their home or clinic which they had chosen. Interviews were audio-recorded if they agree on it. When they did not agree to audio-recording, they allowed to make notes. The audio-recording and notes were transcribed verbatim. The data were collected by a semi-structured interview, and qualitatively analyzed with reference to the method of content analysis of Krippendorff. This study was approved by the Institution Ethics Review Board. And also this study is part of the broader research, which examined how caregivers with brain tumor patients need support.

RESULTS: Interviews were conducted with 8 family caregivers (7 spouse, 1 parent). Qualitative analysis of interview transcripts identified 4 contents, “emotional support and provision of information from the family’s support group”, “information about the disease”, “communication with health care provider “, “development of social service and welfare facility “.

CONCLUSIONS: As following, this study provides specific concepts that include the social and cultural background, “emotional support and provision of information from the family’s support group “means: They know the fact that brain tumor causes to die. So that they wanted to know how it is going to die from family caregivers’ view. Also because it is a rare disease, people can not understand their burden of care without experience. So it is necessary opportunities for them to share their experiences, “development of social service and welfare facility “means: This disease is outside the framework of the social service. Despite of having same symptoms as the other diseases, the social support does not target brain tumor situation. The needs are complex not only the decrease of burden of patients’ care is needed, but also emotional support, share the experience of patients’ care, development of social service and welfare facility. It is essential to cooperate with health care providers as well as relevant departments.

P17 PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMA (PCNSL)

P17.01 CLINICAL PROFILE AND TREATMENT OUTCOMES OF PATIENTS WITH PRIMARY CNS LYMPHOMA IN A TERTIARY HOSPITAL IN THE PHILIPPINES: AN EIGHT-YEAR RETROSPECTIVE REVIEW

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INTRODUCTION: 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 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.

METHODOLGY: This is a descriptive and retrospective study that included all cases of histologically-confirmed 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 were compared to brain lymphoma.

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 extranodal form of Non-Hodgkin’s 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 cheemo-RT had a 2 year survival rate of 33% with a high incidence of neurocognitive delay.

P17.02 DIAGNOSTIC DELAY AND TREATMENT OPTIONS OF PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMA IN THE LAST DECADE: PRELIMINARY RESULTS OF FIRST 50 PATIENTS FROM TWO CATALAN INSTITUTIONS

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BACKGROUND: Primary central nervous system lymphoma (PCNSL) is a challenging disease frequently misdiagnosed and associated with a considerable diagnostic delay. The aim of this study was to ascertain the diagnostic management and frequency of untreated PCNSL in two academic hospitals (Institut Català d’Oncologia, L’Hospitalet and Hospital Clinic, Barcelona).

METHODS: We reviewed the clinical records of all non-immunosuppressed PCNSL patients diagnosed between 2003 and 2014.

RESULTS: We identified 50 patients (34 (68%) were men. Median age was 61.5 [range 30–79] years old and 45 (90%) were of B-cell origin. Most frequent symptoms at clinical presentation were: focal deficit (56%), cognitive impairment (17%), vertigo (18%), psychiatric (10%), visual (10%) and seizures (8%). MRI was performed in the almost all of patients (98%) at a median of 18 [range 1–104] days after the first symptom onset. Multiple and bilateral localization at presentation was observed in 23 (46%) and 19 (38%) patients, respectively. Typical homogeneous contrast enhancement was present in 30 (60 %) patients, being atypical (ring or non-homogeneous) in 18 (28%). In 4 (8%) patients the lesions were not enhanced with gadolinium. Median time to pathological diagnosis from clinical onset was 49 days (95% confidence interval (CI), 36.90–61.09 days) with no differences between patients who were treated or not with steroids (58 vs 42.5 days, p=0.563). PCNSL was confirmed by surgery in 47 (94%) patients. The other 3 patients were diagnosed by CSF cytology (2) or by necropsy (1). Complementary studies were PET (52%), body-TC (50%), bone-marrow (42%), lumbar puncture (36%), and ophthalmologic examination (18%). Only 39 (78%) patients received specific oncologic treatment. Reasons to withhold treatment included poor performance status and/or old age.

CONCLUSION: Our study indicates that the delay between onset of symptoms and diagnosis is too long and that corticosteroid administration doesn’t seem to be the main reason for this delay. Nearly one out of four patients is not treated after diagnosis. Currently a similar study is underway in 20 additional institutions from Spain to confirm these results.

P17.03 PRIMARY SKULL VAULT LYMPHOMA IN ELDERLY PATIENTS

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Primary lymphoma of the bone is uniquely defined as a single mass lesion without any systemic metastasis at other organs. The nature of disease with skull vault involvement is extremely rare and the treatment is also different from other types of skull tumors. We experienced a case of primary skull vault lymphoma in an elderly patient with a massive scalp mass, which was initially treated as osteosarcoma. A 72-year-old female was referred to our department due to headache. On examining the patient, a palpable scalp mass in the right parietal area was noted. Without any evidence of invasion to the other organs, this solitary osteolytic mass in the right parietal area was identified through the imaging studies of brain computed tomography and magnetic resonance imaging. The mass was completely removed.