

expression which makes it more susceptible to anti-PD-L1 antagonism and ADCC through avelumab therapy. **Methods:** This is a single center, phase 2, open label, add-on, single dose study of 156 weeks duration in patients receiving standard therapy for newly diagnosed GBM. In total 30 patients will be entered into the study within 3 weeks of finishing their last day of combined radiotherapy/temozolomide. The following are the results of the first interim analysis completed when the first eight patients completed 52 weeks or an end of study visit. **Results:** 24 patients have so far started therapy. There has been no unexpected treatment emergent adverse event (TEAE). Two patients transiently withheld therapy because of immune related TEAE's and none permanently. The objective response rate at week 52 for the first eight patients was 50% with 2 (25%) having a complete response and 1 (12.5%) a partial response. **Conclusions:** These preliminary results suggest that the addition of avelumab to standard therapy in patients with GBM is safe. Efficacy trends look promising.

NEUROCRITICAL CARE

P.021

Esophageal cooling for hypoxic ischemic encephalopathy: a feasibility study

T Smith (Calgary) P Couillard (Calgary)* P Hruska (Calgary)
P McBeth (Calgary) J Kortbeek (Calgary)*

doi: 10.1017/cjn.2019.121

Background: Targeted temperature management (TTM) is a recognized treatment to decrease mortality and improve neurological function in hypoxic ischemic encephalopathy (HIE). An esophageal cooling device (ECD) has been studied in animal models but human data is limited. ECD appear to offer similar benefits to intravascular cooling catheters with potentially less risk to the patient. We studied whether the ECD could act as a substitute for intravascular cooling catheters. **Methods:** Eight ICU patients admitted following cardiac arrest who required TTM were enrolled prospectively. The primary outcome measures were timeliness of insertion, ease of insertion, user Likert ratings, time to achieve a target temperature of 36°C and time target temperature was maintained within 0.5°C of the 36°C goal for 24 hours using an ECD. **Results:** Time to reach target temperature 0 min to 540 min. ECD appeared to be effective at maintaining a target temperature of 36°C for most patients. In general, the catheter was easy to insert and use. **Conclusions:** For patients requiring TTM, use of an ECD adequately allowed for TTM goals to be achieved and maintained. Overall user evaluation was positive.

NEUROMUSCULAR DISEASE AND EMG

P.022

Myasthenia gravis following dabrafenib and trametinib for metastatic melanoma

A Zaloum (Montreal) JR Falet (Montreal) A Elkrief (Montreal)
C Chalk (Montreal)*

doi: 10.1017/cjn.2019.122

Background: Inhibitors of BRAF and MEK, enzymes in the mitogen-activated protein kinase (MAPK) pathway, are now widely used in the treatment of metastatic melanoma. We report a case of acetylcholine receptor (AChR) antibody-positive myasthenia gravis developing after exposure to dabrafenib, a BRAF inhibitor, and trametinib, a MEK inhibitor. **Methods:** A 68-year-old man presented with dysarthria, dysphagia, cough, dyspnea, and fever. Examination revealed fatigable ptosis and proximal muscle weakness. He had started dabrafenib and trametinib for metastatic melanoma two weeks prior. He was diagnosed with myasthenia gravis and superimposed aspiration pneumonia. AChR antibodies were positive. Dabrafenib and trametinib were stopped. He improved rapidly with pyridostigmine alone, and remained free of myasthenic symptoms for the next two months. Another course of dabrafenib and trametinib was given, and seven weeks later, his myasthenic symptoms recurred. Pyridostigmine produced only partial improvement, and treatment with intravenous immunoglobulin and prednisone was initiated. **Results:** We are unaware of prior reports of an association between BRAF/MEK inhibitors and seropositive myasthenia gravis. The development of myasthenic symptoms twice after BRAF/MEK inhibitor exposure suggests that the association is more than coincidental. **Conclusions:** Myasthenia gravis may be a complication of treatment of melanoma with dabrafenib and trametinib. The mechanism by which this occurs is unknown.

P.023

Eculizumab shows consistent improvements across muscle groups in patients with AChR antibody-positive refractory myasthenia gravis

S Larue (Québec) R Mantegazza (Milan) KP Fujita (Boston)
F O'Brien (Boston) JF Howard, Jr (Chapel Hill)*

doi: 10.1017/cjn.2019.123

Background: The physician-reported Quantitative Myasthenia Gravis (QMG) test was a key efficacy measure in REGAIN, a 26-week, phase 3, placebo-controlled study of eculizumab in anti-acetylcholine receptor antibody-positive refractory generalized MG. Ocular and generalized weakness have shown variable responses to therapies including prednisone and intravenous immunoglobulin/plasma exchange. Using the patient-reported MG Activities of Daily Living (MG-ADL) scale during REGAIN, eculizumab showed a consistent trend toward rapid and sustained improvement across bulbar, respiratory, limb and ocular domains. We analyzed the effect of eculizumab on bulbar, respiratory, gross motor and ocular domains during REGAIN, using the QMG test. **Methods:** QMG domain score changes to REGAIN week 26 were determined for patients with abnormal baseline scores. Repeated-measures analyses were performed for bulbar (swallowing/speech), respiratory (forced vital capacity),