skills, orientation was preserved, but decreased when compared to age-matched controls. Given its cognitive and neural complexity, topographical orientation may be used as a model for network plasticity after early injury.

P.008

Cerebral proliferative angiopathy in a three-year-old

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Background: Cerebral proliferative angiopathy (CPA) is a rare vascular malformation with intervening normal brain tissue interspersed among abnormal vascular channels. There are 77 reported cases, the youngest being 9 years old, with persistent symptoms and recurring symptoms being rare. *Methods:* A three-year-old girl with CPA is described and compared to the literature. *Results:* A previously healthy girl with early left-handedness and a left forehead nevus flammeus presented with sudden onset of right arm and leg weakness, along with abrupt speech arrest and right homonymous hemianopia. Head CT Angiogram and MRI revealed an abnormal vascular network with densely packed, moderately enlarged vessels arising within the white matter with no dominant feeding vessel and both old and acute infarcts in the left hemisphere. Eye exam was unremarkable. The clinical and radiologic features were most consistent with a diagnosis of CPA. Her visual deficits and motor symptoms persisted, and she had a recurrent event shortly after. *Conclusions:* This is the youngest reported case of CPA, with novel features including radiologic evidence of previous infarcts, clinical recurrence of symptoms, and permanent deficits. This case demonstrates the need for further research into the surveillance and management of this rare entity, possibly unique in young children

P.009

Successful treatment of paroxysmal tonic upgaze with low dose Gravol ®

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Background: We present a case of paroxysmal tonic upgaze (PTU) of infancy treated with a daily low dose of Gravol ® to improve symptoms. *Method:* Case report *Results:* A one year-old boy presented with episodes of sustained conjugate upgaze that persisted for 30 to 45 minutes, varied in severity, and occurred with increasing frequency over the past two months. The episodes were worse when fatigued and were relieved by sleep. Pregnancy, delivery, and development were normal. Neurological examination between episodes was normal, as were EEG, brain MRI, and blood analysis. CSF neurotransmitter analysis showed serotonin and dopamine metabolites at lower levels of normal. The patient was diagnosed with paroxysmal tonic upgaze of infancy and was treated with 12.5 mg of Gravol ® daily with complete cessation of episodes. *Conclusions:* Paroxysmal tonic upgaze (PTU) of infancy is a disorder seen in infants where the eyes are forcibly deviated upwards for minutes to hours at a time. PTU often resolves spontaneously over several months, however episodes are extremely debilitating. Currently, treatments with levodopa have been tried with some success. Via its anticholinergic effects, Gravol may be a novel therapeutic option for PTU, negating the need to use serotonergic medications.

Child Neurology (Neurocritical Care/Neuro Trauma)

P.010

Bacterial meningitis secondary to an intranasal encephalocele presenting as unilateral facial nerve palsy

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Background: Focal neurological deficits occur in approximately 15% of children with bacterial meningitis. However, cranial nerve involvement such as facial-nerve palsy is uncommon in non-tuberculous bacterial meningitis. *Methods:* Case Report. Review of the literature was conducted on Pubmed for the search terms: facial nerve palsy and meningitis. *Results:* We present the case of a 4-year old right-handed girl who presented with a new onset unilateral facial nerve palsy preceded by 5-day history of fever and headaches. The patient had meningeal signs and was identified to have Streptococcal Meningitis. MRI of the brain showed a large previously undiagnosed intranasal encephalocele. The facial palsy resolved within 7 days of antibiotic treatment. *Conclusions:* Our case represents an unusual combination of facial nerve palsy in context of Streptococcal Meningitis secondary to intranasal encephalocele.

Multidisciplinary

P.011

The cerebrovascular response to ketamine: a systematic review of the animal and human literature

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Introduction: Ketamine, an N-methyl D-aspartate (NMDA) receptor antagonist, carries potential benefit in patients with neurological illness. The cerebrovascular/cerebral blood flow (CBF) response to ketamine has been poorly outlined in the literature. *Methods:* We performed a systematic review of the literature on the cerebrovascular/CBF effects of ketamine in both animal and human subjects. *Results:* We identified 38 animal studies, and 20 human studies. Within the animal studies, a variety of different models were utilized with the majority focusing changes in global CBF or regional cerebral blood flow (rCBF). Overall, ketamine led to an increase in either global CBF or rCBF, with a vasodilatory effect in medium cerebral vessels. With the human studies a total of 379 patients, 107 of which were control subjects, were studied. Most studies focused on either 131Xe CT or PET imaging with ketamine administration. There was a trend to an increase in global CBF and rCBF with ketamine administration. *Conclusions:* Animal models indicate an increase in global CBF and rCBF with ketamine administration. Human studies display