The main indication for MRI was headache waking at night (16%) and an atypical headache (16%). 32% of patients had a previous MRI either for a different indication or done by the referring hospital prior to headache clinic.

Outcomes were positive with 71% of patients symptoms improving or completely resolving. 28% of patients had no improvement in symptoms. The most common treatments were Sumatriptan (43% of patients) and Ibuprofen (26% of patients), 21% of patients were medication free at the last appointment.

**Conclusion** Management of headache in children in our specialist tertiary clinic shows largely positive outcomes in improvement of symptoms. MRI was requested for majority of patients with no serious pathology identified in any patients. We suggest that while MRI is a useful tool, careful assessment and management of the symptoms may be able to avoid unnecessary investigations in majority some patients and improve their symptoms.

**Introduction** Transverse myelitis (TM) is a neurological disorder causing acute cord injury as a result of acute inflammation, and it is often associated with infectious or autoimmune disease. 20% of all cases of TM occur in children. Since 2015, an outbreak of Zika Virus infection (ZiKV) has been reported in over 30 countries. Emerging evidence suggest ZiKV causes a spectrum of neurologic diseases both directly and by secondary autoimmunity. In pregnancy, ZiKV is a well-known cause of congenital brain abnormalities, including microcephaly, and has been linked with Guillain-Barre syndrome. However, its association with seizures in children is not well described.

**Methods** We undertook a systematic review of the English literature published from 1947 to August 2017 to evaluate the risk factors, epidemiology, clinical presentation, management and outcomes of TM following Zika virus infection in children less than 18 years. Data sources included MEDLINE, EMBASE, Cochrane library, and references within identified articles. We also searched the papers using the ISI web of knowledge, to identify relevant articles and conference proceedings.

**Results** We identified 140 potential studies, of which 8 were duplicate and 122 were excluded on the basis of title and abstracts. A further 2 additional studies did not meet eligibility criteria. Of the 8 eligible studies [3–10], there were 215 with confirmed ZiKV in children less than 18 years by either RT-PCR in plasma, CSF and urine, EEG and MRI while excluding other etiologies. 20% (n=44) cases of had severe. Among 5 studies reporting clinical characteristics and outcome, the mean age was 5 months (Range 1–8 months) and 75% (n=12/16) of cases were female. All had abnormal neuroimaging (n=44) and responded to anti-convulsant therapy, with no reported mortality.

**Conclusions and clinical implications** Complications from ZiKV, although uncommon, may be severe. With international spread, clinicians need to be aware that ZiKV may be associated with seizures in children. Therefore, standardising the collection and reporting for individual cases across regions and countries would further allow meaningful analysis of the data collected, enabling monitoring of trends over time.

**Association of Paediatric Emergency Medicine**

**G328(P) RISK OF TRANSVERSE MYELITIS FOLLOWING ZIKA VIRUS INFECTION**

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**Association of Paediatric Emergency Medicine**

**G329(P) RISK OF SEIZURE FOLLOWING ZIKA VIRUS INFECTION IN CHILDREN**

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**Introduction** Since 2015, an outbreak of Zika Virus infection (ZiKV) has been reported in over 30 countries. Emerging evidence suggest ZiKV causes a spectrum of neurologic diseases both directly and by secondary autoimmunity. In pregnancy, ZiKV is a well-known cause of congenital brain abnormalities, including microcephaly, and has been linked with Guillain-Barre syndrome. However, its association with seizures in children is not well described.

**Methods** We undertook a systematic review of the English literature published from 1947 to August 2017 to evaluate the risk factors, epidemiology, clinical presentation, management and outcomes of seizure following Zika virus infection in children less than 18 years. Data sources included MEDLINE, EMBASE, Cochrane library, and references within identified articles. We also searched the papers using the ISI web of knowledge, to identify relevant articles and conference proceedings.

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**Conclusions and clinical implications** Complications from ZiKV, although uncommon, may be severe. With international spread, clinicians need to be aware that ZiKV may be associated with seizures in children. Therefore, standardising the collection and reporting for individual cases across regions and countries would further allow meaningful analysis of the data collected, enabling monitoring of trends over time.
Aim To assess the efficacy of oral prednisolone in pre-school-aged children presenting to a paediatric emergency department (PED) with viral associated wheeze.

Methods A superiority analysis of the randomised, double-blind placebo controlled trial, comparing the effect of a 3 day course of daily oral prednisolone (1 mg/kg/day) with placebo on the primary outcome of length of hospital stay in children (aged 24 to 72 months) presenting to a tertiary PED with VAW.

Results Between June 2012 and June 2015 we randomised 624 eligible patients with 605 (300 placebo and 305 prednisolone) being available for full analysis. The ‘ready for discharge’ length of stay (LOS) was significantly reduced in the prednisolone group (median [interquartile range] 370 min [121, 709]) compared to placebo (median [interquartile range] 540 min [124, 971]); the unadjusted ratio of geometric means for LOS was 0.79 (95% CI; 0.64, 0.97; p=0.0227, n=605). The prednisolone group had significantly reduced risk, relative to placebo group, of the LOS exceeding either 7 or 12 hours, adjusted RR 0.82 (95% CI; 0.69,0.96; p=0.0166) and 0.67 (95% CI; 0.51,0.86; p=0.0018) respectively. Subgroup analysis demonstrated efficacy (reduced continuous LOS, and reduced risk of LOS exceeding either 7 or 12 hours) for prednisolone among patients with more severe exacerbations. The absolute reduction (difference) in the percentage of patients with a LOS exceeding 12 hours (13.7%) represents a number needed to treat of approximately 8 patients to prevent the LOS of 1 patient exceeding 12 hours.

Conclusion Oral prednisolone demonstrated a clear benefit over placebo at reducing the LOS in children presenting to a PED with viral associated wheeze; with the greatest efficacy observed among patients with more severe features of wheeze.

G332 ACUTE TRAUMATIC COAGULOPATHY IN THE PAEDIATRIC POPULATION: A SYSTEMATIC REVIEW

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Introduction Acute traumatic coagulopathy is a clinically distinct coagulopathy resulting from the injury itself and subsequent hypoperfusion. The condition has been associated with increased morbidity and mortality in adults but little is known about the condition in children.

Objective This review aims to summarise current literature regarding the incidence of acute traumatic coagulopathy in a paediatric population and associated risk factors and outcomes.

Evidence review We carried out searches of Medline, EMBASE and Cochrane library databases as well as the following registries: clinicaltrials.gov, the European Union Clinical Trials Register and the International Standard Randomised Controlled Trial Number (ISRCTN) registry. Searches were limited to studies published from 2003, the point at which acute traumatic coagulopathy was defined. For each relevant study identified, reference and author specific searches were carried out. Finally, the grey literature was searched. Any study defining acute traumatic coagulopathy as an international normalised ratio (INR) >1.2, including individuals aged 17 or less with any type of traumatic injury was eligible.

Results We identified a total of nine studies that met the inclusion criteria. All studies were retrospective cohort studies deemed to be at low or uncertain risk of bias. Eight studies were conducted in trauma centres in the United States and one in combat support hospitals in Iraq and Afghanistan. Study populations ranged from 84 to 1531 participants. Acute traumatic coagulopathy was present in 31.7% (range 24.6%–40.9%). Mortality was 29.3% (range 21.2%–60%) in those...