Combination therapy of albendazole and praziquantel vs albendazole monotherapy in children with persistent neurocysticercosis (J Child Neurol. 2022;37:366-72)

Persistent lesions after the first course of albendazole poses a clinical dilemma in choosing the next line of treatment in neurocysticercosis. This study examines the safety and efficacy of albendazole and praziquantel in combination for complete radiologic resolution in children with persistent neurocysticercosis when compared with albendazole monotherapy and placebo. The majority (62%) of children in the combination therapy group showed complete resolution of the persisting lesion at the end of 6 months compared to the albendazole alone group (26.3%). Percentage reduction in the lesion’s mean area at 6 months was highest in the combination group compared with other groups. The combination therapy did not result in any adverse drug reaction compared with albendazole monotherapy. Thus, a combination of praziquantel and albendazole is an effective and safe regimen for persistent neurocysticercosis.

Italian league against epilepsy guidance on alternatives to valproate in girls and women of childbearing potential with idiopathic generalized epilepsies (Seizure. 2021;85:26-38)

Idiopathic generalized epilepsy is one of the commonest epilepsy syndromes in adolescent girls and requires long-term anti-seizure medication (ASM) therapy. Valproic acid (VPA) is often the drug of choice in most generalized epilepsy syndromes. However, the use of valproate in young girls is associated with a risk of reproductive adverse effects. In contrast with focal epilepsies, for which several alternative ASMs are available, suitable options for the treatment of idiopathic generalized epilepsy (IGE) are limited. With the exception of absence seizures, the literature lacks high quality studies on ASMs in IGEs. This guideline recommends based on available literature and expert consensus, that in young girls, levetiracetam, lamotrigine and ethosuximide should be considered the first-choice drugs in generalized epilepsy syndromes, instead of valproic acid.

Modified zipper method, a promising treatment option in severe pediatric immune-mediated neurologic disorders (J Child Neurol. 2022;37:505-16)

The treatment of severe immune mediated disorders with the customary step-latter approach (gradual escalation of immunomodulation) is often unsatisfactory (as against an aggressive approach). In this study a modification of the “zipper method”—a treatment strategy alternating intravenous immunoglobulin (IVIG) and plasma exchange (PLEX), was used for severe immune-mediated disorders. The modified zipper method comprised longer intervals between PLEX-IVIG cycles (48 hours instead of 24 hours), more cycles (7-10 instead of 5), a consistent plasma volume exchange (instead of the original multistep approach), and variable infusion times for IVIGs (4-8 hours). The modified zipper method was applied as an individual treatment approach once standard therapy failed. The follow-up ranged from 6 months to 2 years. Four children (9-15 years) with (1) Miller-Fisher syndrome, (2) Bickerstaff brainstem encephalitis, (3) common Guillain- Barre syndrome, and (4) severe acute disseminated encephalomyelitis were treated by the modified zipper method. Results for duration of mechanical ventilation hospital stay and time to unaided walking outperformed previous studies with IVIG/PLEX alone or IVIG + PLEX combinations unlike the zipper method. They conclude that the ‘modified zipper method’ is a low mortality, a short mechanical ventilation time, a short hospital stay, and has an excellent outcome in children with severe Guillain-Barre syndrome or acute disseminated encephalomyelitis.

Breastfed infants with spells, tremor, or irritability: Rule out vitamin B12 deficiency (Pediatr Neurol. 2022;131:4-12)

Vitamin B12 deficiency in infancy has important and often under-recognized neurological manifestations. In this Norwegian study of 85 infants with vitamin B12 deficiency, 80% presented with spells (37%) of apneas, motor seizures, or absences within the first two months of life. Tremor (29%) and irritability (18%) were the most common findings at the first examination. Serum total homocysteine (a surrogate marker of Vitamin B12 deficiency) >10 μmol/L was found in 77% of cases compared to 28% of controls. None of the mothers were vegetarians, but 25% reported a previous history of vitamin B12 deficiency and 7% had celiac disease. The dose of nitrous oxide given during labor was significantly associated with infant serum total homocysteine level at diagnosis. This shows that spells, tremors and irritability are common findings in infantile vitamin B12 deficiency.

Efficacy and tolerability of melatonin vs triclofos to achieve sleep for pediatric electroencephalography: A single blinded randomized controlled trial (Eur J Paediatr Neurol. 2021;34:14-20)

Sedation for electroencephalography (EEG) requires induction of natural sleep rather than the use of pharmacological sedatives, since these medications have effects on the pattern of electrical activity thereby affecting interpretation of the EEG. Oral triclofos has been used for this purpose but the availability of this drug has been erratic. Melatonin is an attractive alternative with its specific effect on shortening sleep latency and increasing total restful sleep time. This study compares melatonin and triclofos for effectiveness in this context. Among 228 children, the proportion of successful EEG was 89.4% in melatonin and 91.2% in triclofos group. First dose was effective in 64% in melatonin and 63.15% in triclofos group. Augmenta-tion dose was needed in 25.4% in melatonin and 28% in triclofos group. Adverse effects were observed in 6.14% of melatonin and 8.65% of triclofos group. Study results indicate that melatonin is a safe alternative to triclofos.

SHIVANKESAVAN shivankesavan@gmail.com