

 **Evidence-based guideline update from AAN: Vagus nerve stimulation for the treatment of epilepsy** (*Neurology* 10.1212/WNL.0b013e3182a393d1)

Vagus nerve stimulation (VNS) is being used as adjunctive therapy for reducing the frequency of seizures in patients older than 12 years with partial-onset seizures refractory to antiepileptic medications since 1997. There are various reasons based on key findings of VNS that one should consider it as a regular therapy in children also. As per this new Guideline, VNS may be considered for seizures in children, for LGS-associated seizures, and for improving mood in adults with epilepsy. VNS may be considered to have improved efficacy over time. Children should be carefully monitored for site infection after VNS implantation.


 **Pepsin in bronchoalveolar lavage (BAL) fluid to identify aspiration-associated extra-esophageal reflux disease (AERD) in children with chronic respiratory symptoms** (*JAMA Oto. doi:10.1001/jamaoto.2013.4448*)

The role of aspiration-associated extraesophageal reflux disease (AERD) in patients with chronic respiratory symptoms is not well defined. This study was done to determine the prevalence of AERD in patients with chronic respiratory symptoms and to assess the utility of pepsin as a new marker for AERD. Western blot analysis for pepsin and oil red O staining for lipid-laden macrophages (LLMs) was performed on bronchoalveolar lavage fluid specimens. It was found that presence of pepsin was a better predictor of AERD in patients with respiratory symptoms compared with controls than presence of LLMs. Thus, detection of pepsin in bronchoalveolar lavage fluid specimens can serve as a biomarker for AERD and is potentially superior to the current method of measuring LLMs.


 **Soft drinks linked to aggression, inattention in younger kids also** (*J Pediatr DOI: 10.1016/j.jpeds.2013.06.023*)

Soft drinks are consumed by individuals of all ages, including very young children. Although soft drink consumption is associated with aggression, depression, and suicidal thoughts in adolescents, the relationship has not been evaluated in younger children. A new study finds that aggression, attention problems, and withdrawal behavior are all associated with soft drink consumption in young children. A cohort study in USA of 5-year-olds study group showed that those who drank 1 to 4 servings of soft drink per day had significantly higher aggressive measurement scores than their peers who drank no soft drink and those who consumed 2 or more servings had

higher withdrawn behaviour scores, and those who consumed 4 or more servings had higher attention problem scores. The message is very clear that consumption of even 1 soft drink per day may be associated with increased negative behavior in young children and the simple message is that the consumption of water or milk is more nutritious and a better alternative.

 **Pyloric stenosis linked to low serum lipids in infants** (*JAMA. 2013;310:714-721*)

This study identified a new genome-wide significant locus for infantile hypertrophic pyloric stenosis (IHPS). Characteristics of this locus suggest the possibility of an inverse relationship between levels of circulating cholesterol in neonates and risk of IHPS.

 **Different PCV (pneumococcal vaccine) schedule – same protection** (*JAMA 2013; 310: 930-937*)

This study compared immunogenicity of 4 different schedules using the 13-valent PCV (PCV13) to assess the optimal primary regimen with respect to antibody induction. The schedules studied were - PCV13 either at ages 2,4, and 6 months (2-4-6); at ages 3 and 5 months (3-5); at ages 2,3, and 4 months (2-3-4); or at ages 2 and 4 months (2-4), with a booster dose at age 11.5 months.

Results are interesting! The researchers found that one month after the booster dose, there were no differences in IgG geometric mean concentrations (GMCs) between the schedules for 70 of 78 comparisons. The 2-4-6 schedule was superior to the 2-3-4 schedule for serotypes 18C and 23F and superior to the 2-4 schedule for serotypes 6B, 18C, and 23F. For serotype 1, the 3-5 schedule was superior to the 2-4-6, 2-3-4, and 2-4 schedules. Secondary outcomes (GMCs measured 1 month after the primary series, at 8 months of age, and before the booster) demonstrated differences 1 month after the primary series. The 2-4-6 schedule was superior compared with the 3-5, 2-3-4, and 2-4 schedules for 3,9, and 11 serotypes, respectively. Differences between schedules persisted until the booster dose. The primary outcome of this study, GMCs 1 month after the booster dose, showed that there were no statistically significant differences between the 4 schedules in IgG levels for most serotypes. However, differences between schedules were noted in secondary analyses. Findings demonstrate that optimal timing of the primary series, i.e., older age at vaccinations combined with longer intervals between vaccinations, is important to maintain optimal antibody levels during the period between the primary series and the booster dose.

Amit P Shah
drnehamit@gmail.com