

The 5th Chinese American Neurological Association Annual Meeting

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Meeting Report

The 5th Annual Meeting of Chinese American Neurological Association (CANA) was successfully held virtually on November 7, 2020. More than 160 licensed practitioners from several countries including the USA, China, Canada and Australia participated in this whole day virtual meeting on “Neurology Updates”.

David Wang, DO, FAHA, FAAN (Barrow Neurological Institute, Phoenix, AZ) conducted “COVID-19 and Neurological Manifestations”. COVID-19 is a respiratory disorder, but it causes many neurological symptoms including loss of taste and smell, nerve pain, headache, sleepiness, muscle aches, GBS, stroke and encephalopathy. SARS-CoV-2 may directly cause thromboembolism in severe COVID-19 patients, resulting in stroke, pulmonary embolism and myocardial infarct. Preventing a COVID-19 patient from a stroke is difficult. Monitoring D-Dimer can be helpful as it may serve a biologic marker for cytokine storm and coagulopathy. Empiric treatment with short term anticoagulation may be beneficial. There is no convincing evidence supporting the hypothesis that SARS-CoV-2 directly invades brain tissue. Autopsy from COVID-19 victims showed that most brain injuries were related to hypoxia, other than strokes. The cause of GBS related to COVID-19 is likely immunological. Loss of smell and taste can be a reliable sign of a COVID-19 more than with a flu.

Wuwei Feng, MD, MS (Duke University, Durham, NC) talked “Stroke Diagnosis and Management Update” based on the current guidelines.

Jin Li, MD, PhD, FAAN, FAANEM (New York Med. Coll., West Chester, NY) conducted a review of “Migraine Update and New Treatments” on the newly FDA-approved agents for treating episodic and chronic migraine. Newly FDA-approved monoclonal antibodies include Erenumab (Aimovig) which is a human monoclonal antibody against calcitonin gene related peptide (CGRP) receptor; Fremanezumab (Ajovy) and Galcanezumab (Emgality) which are humanized monoclonal antibodies against CGRP ligands. All 3 antibodies can be injected subcutaneously monthly while Fremanezumab also be quarterly. They all have excellent adverse effect profiles comparable to placebos. Small molecules of CGRP receptor antagonists, known as gepants, are effective for acute migraine, including Ubrogepant (Ubrovelvy) and Rimegepant (Nurtec) without significant liver dysfunction. Serotonin receptor agonist, Lamiditan (Reyvow) selectively binds to the 5-HT_{1F} receptor subtype and penetrates the central nerve system resulting in 2-hour headache free after dosing than placebo without significant cardiac adverse effect. Non-pharmaceutical approaches were discussed including that transcranial magnetic stimulation and cranial nerve stimulation on bilateral supraorbital nerves for 20-minutes daily can be effective in migraine prevention, while 60-minutes stimulation for acute treatment. Vagus nerve stimulation such as GammaCore, can be beneficial for both acute treatment and chronic prevention while peripheral nerve stimulation, Nerivio, for acute migraine.

Tuan Hoang Vu, MD, (University of South Florida, Tampa, FL) introduced the newly FDA-approved eculizumab (soliris) in treatment for adult patients with anti-acetylcholine receptor antibody positive generalized Myasthenia Gravis.

Nan Jiang, MD (University of Alabama, Birmingham, AL) provided a succinct review of literature on “neuromuscular updates” focused on CIDP (chronic inflammatory demyelinating polyneuropathy) including variant subtypes, such as distal CIDP (DADS), multifocal CIDP, multifocal acquired demyelinating sensory and motor polyneuropathy (MADSAM) or Lewis-Sumner Syndrome, motor (predominant) and sensory CIDP, emphasizing diagnostic challenges. On the other hand, misdiagnosis of CIDP is not uncommon due to the pitfalls of 1) existence of CIDP variants; 2) non-uniform electrodiagnostic criteria; 3) CSF protein variations may be age-dependent, such as 0.45-0.6 g/L for age > 50 can be normal; and additionally, comorbidity may cause CSF protein elevated, such as degenerative spinal stenosis or diabetes mellitus; and 4) falsely interpreting the response to treatment on subjective reporting. Objective metrics in documenting clinical change are recommended such as grip strength (Jamar hand dynamometer) or the MRC scale for muscle strength and disability assessment by the I-RODS or INCAT to evaluate the responses. Current research and clinically available therapies for CIDP were briefly reviewed.

Huijuan Zhang, MD, PhD, FAAN (Providence St. Joseph Health, Richland, WA) talked “multiple sclerosis (MS) and NMOSD Management Update”. MS and NMOSD diagnosis criteria have evolved over the years which enable neurologists to make earlier diagnoses. However, it is important to avoid misdiagnosing MS. MS should be differentiated from other distinctive CNS inflammatory/demyelinating diseases such as NMOSD. With more than twenty FDA-approved disease modifying therapies, it is challenging to make treatment decisions because the MS disease course is unpredictable and varies for each patient. It entails a complicated risk/benefit analysis of taking an escalation versus induction approach because there are many DMTs, including injectable, oral and infusion therapies, that differ in efficacy, side effects, monitoring, and cost. The goal of treatment for MS and NMOSD is to modify disease processes by reducing relapsing, reducing brain or spinal cord lesions and atrophy, and preventing accumulation of disability.

Lin Zhang, MD, PhD, FAAN (UC Davis, Sacramento, CA) summarized “Parkinson’s Disease (PD) Management Updates”. Diagnosis and treatment of Parkinson disease have advanced significantly over the past decade. The availability of DaT scan and genetic testing provide accurate and early diagnostic and prognostic information. Oral carbidopa/levodopa remains the cornerstone treatment. Adjunct therapies include agonists in the forms of subcutaneous and sublingual apomorphine; long-acting amantadine (gocovri); a third generation MAOI (safinamide); the first A2A antagonist, istradefylline, surgical interventions including deep brain stimulation (DBS), MRI or ultrasound-guided lesion surgery for tremors; and molecular approaches including gene therapy. Management of the non-motor symptoms,

orthostatic hypertension, psychosis, dementia and depression were elaborated.

Lingling Rong, MD (Mercy Health, Toledo, OH) talked “Epilepsy Treatment and Updates” by reviewing literature of the last two years on epilepsy in seizure prediction, detection and treatment. No reliable seizure predictor in seizure prediction has been found. The only wrist-worn device, Embrace 2, made by Empatoca and received FDA clearance in 2018, can be used in patients at 6 years of age and older to detect generalized tonic-clonic seizures. For treatment, 8 new FDA-approved medications include Cenobamate, Stiripentol, Epidiolex, Clobazam, Clobazam oral form, nasal spray of Valtoco and Midazolam; and Fintepla. Ketogenic diet and marijuana in treating refractory seizures were narrated. Surgical interventions were discussed including Vagus nerve stimulation, neurostimulation, DBS and transcranial magnet stimulation. It is noteworthy, that approximate 4000 epileptic surgeries performed in the USA produced favorable outcomes.

In the Workshop, Katherine K. Wang, MD, PhD (Harvard Vanguard Medical Association, Boston, MA) demonstrated “Botulinum Toxin in Neurology Clinical Practice”. Four botulinum toxins: botox, dysport, xeomin and myobloc were discussed, Diagnostic pearls and injection techniques were demonstrated for focal dystonia (blepharospasm, hemifacial spasm, cervical dystonia), axillary hyperhidrosis and sialorrhea, including how to inject botox into the muscles of orbicularis oculi, pretarsal, preseptal or periorbital portions and eyebrows such as procerus and corrugator for blepharospasm, and neck muscles for cervical dystonia. Sara Chen, MD, PhD (Robert Wood Johnson Medical Group Neurology, New Brunswick, NJ) briefly introduced the utilities of Skin Biopsy.

Practice forum had been a hot spot in the past CANA Annual Meetings and so did this year. Led by Howard Kuo, MD, PhD (Newark, NJ), Yang Keyi, MD, PhD (Mt. Rainier Neurol., Seattle, WA), James Wang, MD, PhD (Tri-State Neurol., Memphis, TN) and Ding Lei, MD (Flushing Hosp., New York, NY), some hot topics in private practice and academic circumstances were discussed, which was actively fueled up by many attendees including veterans and new hands in neurology practice and academicians.

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