News and Views

Is It Time to Switch from TSH to T4 for Assessment of Thyroid Function?

When it comes to assessment of thyroid function, thyroid hormone levels, particularly free thyroxine (FT4) levels, consistently show more robust associations with a range of clinical conditions compared to the standard measure of thyroid-stimulating hormone (TSH), reported a systematic review and meta-analysis of over 50 studies published in *Thyroid*.

Investigators stated that there was no indication of, or reference to, any work to suggest that TSH levels consistently indicate thyroid status of any organ or tissue more strongly than thyroid hormone levels… *(Medscape)*

Steroids, But Not Anti-TNF, Linked to Severe COVID-19 in IBD Patients

Increasing age, comorbidities and corticosteroids as well as other anti-inflammatories seem to be correlated with severe coronavirus disease 2019 (COVID-19) infection in inflammatory bowel disease (IBD) patients, but tumor necrosis factor (TNF) antagonists appeared not to be linked to severe COVID-19, suggested an analysis of a large geographically diverse registry of pediatric and adult IBD patients.

Risk factors for severe COVID-19 among IBD patients included systemic corticosteroids: adjusted odds ratio (AOR) 6.9 (95% confidence interval [CI] 2.3-20.5); sulfasalazine or 5-aminosalicylate use: AOR 3.1 (95% CI 1.3-7.7); two or more comorbidities: AOR 2.9 (95% CI 1.1-7.8) and increasing age: AOR 1.04 (95% CI 1.01-1.02), reported researchers in *Gastroenterology*.

Safety and Efficacy Tretinoin 0.05% Lotion in Moderate-to-severe Acne Vulgaris in Adult Females

A tretinoin 0.05% lotion formulation has shown to be effective and well-tolerated, especially in adult female acne patients. Patients with more severe disease might show clinically significant improvement with topical monotherapy. Topical retinoids might provide realistic treatment options in these patients.

An analysis was done to evaluate the safety and effectiveness of once-daily tretinoin 0.05% lotion in adult females with moderate or severe acne. Post hoc analysis of two multicenter, randomized, double-blind, vehicle controlled phase 3 studies were done. Adult females aged 18 years or more with moderate (n = 551) and severe (n = 55) acne were randomized to receive tretinoin 0.05% lotion. Once-daily application of the lotion was advised for 12 weeks.

Evaluation of efficacy included changes in baseline inflammatory/non-inflammatory lesions, treatment success (2-grade reduction in Evaluator's Global Severity Score [EGSS] and almost clear) and quality-of-life (QoL) using the validated Acne-QoL survey. Safety, adverse events (AEs) and cutaneous acceptability were also evaluated.

Efficacy in adult females with moderate acne (EGSS = 3) treated with tretinoin 0.05% lotion was significantly better than reported with vehicle at Week 12. Mean percent reduction in inflammatory and non-inflammatory lesion counts was 58.5% and 55.5%, respectively, as compared with vehicle which was 50.3% and 39.8% with vehicle ($p = 0.039$ and $p < 0.001$).

Treatment success was attained by 25.4% of participants by Week 12, compared with 15.4% with vehicle ($p = 0.006$). Tretinoin 0.05% lotion was more effective in adult females with severe acne (EGSS = 4). Mean percent reduction in inflammatory and non-inflammatory lesion counts was 59.0% and 58.8%, respectively as compared with vehicle which was 53.5% and 45.5%. Treatment success was attained by 17.9% of subjects compared with 4.5% with vehicle, with 46.6% of participants achieving at least a 2-grade improvement in EGSS by Week 12.

Improvement in quality-of-life with tretinoin 0.05% lotion was significant as compared with vehicle in adult females with moderate acne, but not in severe acne. The AEs were mild and temporary. Local cutaneous safety and tolerability assessments were mild-to-moderate and had improved by Week 12.

The analysis concluded that tretinoin 0.05% lotion was significantly more effective than vehicle in gaining treatment success and reducing inflammatory and non-inflammatory lesions in adult females with moderate acne to severe acne. Also, it was well-tolerated with mild adverse events.

Source: Harper JC, Baldwin H, Stein Gold L, et al. J Drugs Dermatol. 2019;18(11):1147-54.

PDE5 Inhibitor Tadalafil for Chronic Prostatitis/ Pelvic Pain

Daily administration of the phosphodiesterase type 5 (PDE5) inhibitor tadalafil led to a significant reduction in symptoms caused by chronic prostatitis, also known as chronic pelvic pain syndrome (CP/CPPS), in a small group of men treated with PDE5 inhibition for a mean of 1.3 years.

The study included 25 men diagnosed with CP/CPPS. Continued use of tadalafil at 5 mg/day for at least 3 months decreased the National Institute of Health total chronic prostatitis syndrome index (CPSI) score by a mean of -12.9 compared with baseline ($p < 0.001$), suggested researchers in *Translational Andrology and Urology*.

Pruritus in Autoimmune Connective Tissue Diseases is a Characteristic Symptom

Autoimmune connective tissue diseases (ACTDs) are a wide range of diseases that are featured by immune dysregulation. They often have multisystem involvement with noticeable skin manifestations. One of the most common symptoms in these diseases is pruritus. Pruritus has a significant impact on the QoL of patients.

A review study was done to illustrate the frequency, location, severity and timing comparative to disease onset of pruritus in various ACTDs. A chart review of all patients was seen in the Rheumatology-Dermatology clinic at Massachusetts General Hospital.

Itch was a distressing symptom in 83% of dermatomyositis (DM), 61% of systemic lupus erythematosus (SLE) complained of itching, 59% of Sjogren syndrome (SJO) reported itching, 22% of systemic sclerosis (SSc) reported itching and 60% of mixed connective tissue disease. In DM and SLE, itch corresponded the course of inflammatory skin manifestations in 83% and 45%, respectively. Itch in DM was more extreme and more treatment resistant in 12% of DM vs. 1% in SLE. In comparison, itch in SSc and SJO occur later in the disease course, 86% vs. 42%, respectively.

The review concluded that in all ACTDs, itch was common and is mostly underevaluated and undertreated. Pruritus is more common and severe in DM than in SLE. Also, pruritus treatment in ACTDs is challenging, and at times multimodal therapy is necessary.

Source: Yahya A, Gideon PS. J Drugs Dermatol. 2019;18(10):995-8.

High-intensity Exercise Builds Bone in Older Men

A high-intensity exercise program, already known to improve bone density and performance in women, has been found to be effective in older men with low bone density, suggested the LIFTMOR-M study, and published in the journal *Bone*.

The protocol involves barbell-based weightlifting and impact training involving jumping chin-ups. Investigators noted that after 8 months, those in the high-intensity resistance and impact training (HiRIT) group had improved medial femoral neck cortical thickness, compared to controls (5.6% vs. –0.1%) and isometric axial compression (IAC; 5.6% vs. 0.7%). Those in the HiRIT group maintained distal tibia trabecular area, while the control group had a loss (0.2% vs. –1.6%)… *(Medscape)*

Are ACE Inhibitors Protective Against Severe COVID-19?

A nationwide US observational study has suggested that angiotensin-converting enzyme (ACE) inhibitors may be protective against severe illness in older people with COVID-19, propelling a randomized clinical trial to test the strategy.

Furthermore, a new meta-analysis of all the available data on the use of ACE inhibitors and angiotensin receptor blockers (ARBs) in COVID-19–infected patients has revealed that these drugs are not associated with more severe disease and do not heighten the susceptibility to infection.

The observational study, published on the MedRxiv preprint server, noted that the use of ACE inhibitors was tied to an almost 40% lower risk for COVID-19 hospitalization for older people enrolled in Medicare Advantage plans… *(Medscape)*

FDA Approves Apomorphine Sublingual Film for 'Off' Episodes in PD

The US Food and Drug Administration (FDA) has granted approval to apomorphine hydrochloride sublingual film for acute, intermittent treatment of 'off' episodes in patients with Parkinson's disease (PD).

This is the first approval for a sublingual therapy for this indication, described as the reappearance or worsening of PD symptoms that have otherwise been controlled with standard care with levodopa/ carbidopa… *(Medscape)*

Sleep Disturbance May Predict Rapid Cognitive Decline in AD

Excessive sleep disturbances are associated with increased cognitive decline in patients with Alzheimer's disease (AD), suggests new research presented on AAN.com as part of the American Academy of Neurology (AAN) 2020 Science Highlights.

Records from the National Alzheimer's Coordinating Center (NACC) datasets for over 400 patients with autopsy-confirmed AD, all initially cognitively intact, revealed that those who experienced nighttime behaviors (NTB) at baseline had a significantly higher rate of cognitive decline compared to those without NTB… *(Medscape)*

Does Miscarriage Predict Type 2 Diabetes?

Later life diabetes risk was associated with a history of miscarriage, with what could be considered a dose response; reported a Danish study online in *Diabetologia*.

Women had a higher likelihood of later developing type 2 diabetes if they had ever lost a pregnancy compared with women who had never experienced a pregnancy loss, reported researchers. The odds of later developing diabetes increased if the woman lost more pregnancies compared to women who had been pregnant but never miscarried: One pregnancy loss: Odds ratio (OR) 1.18 (95% CI 1.13-1.23); Two pregnancy losses: OR 1.38 (95% CI 1.27-1.49); Over three pregnancy losses: OR 1.71 (95% CI 1.53-1.92)… *(Medpage Today)*

Mother's Oral Fluconazole Use Tied to Bone and Muscle Defects in Baby

Use of oral fluconazole in pregnancy has been linked with increased risk for congenital bone and muscle abnormalities in a population-based cohort study.

Investigators noted that mothers who took low-dose fluconazole during the first trimester had 30% higher likelihood of delivering infants with musculoskeletal malformations (relative risk [RR] 1.30, 95% CI 1.09-1.56). The findings were published in The BMJ… *(Medpage Today)*

'Clear Signature' of ALS Found in Children's Teeth

Adults who develop amyotrophic lateral sclerosis (ALS) metabolize metals differently compared to those who do not develop the neurodegenerative disease, and the signs are seen in teeth during childhood, suggests new research.

Investigators noted increased uptake of a mix of metals, including chromium, manganese, nickel, tin and zinc, in the teeth of those who developed ALS. Senior author Manish Arora, PhD, MPH, Vice Chair, Environmental Medicine and Public Health, Icahn School of Medicine at Mount Sinai, New York City, stated that the study findings suggested that metal dysregulation during specific periods in childhood and early adolescence are tied to onset of ALS decades-later. The findings were published online May 21 in *Annals of Clinical and Translational Neurology*.

Remdesivir Data from NIAID Trial Published

Peer-reviewed findings have been published recently from one of the key trials of remdesivir, possibly the most promising antiviral agent for COVID-19, confirming topline results announced a month ago.

Hospitalized patients with COVID-19 administered remdesivir had a median recovery time of 11 days compared to 15 days with placebo (rate ratio for recovery 1.32, 95% CI 1.12-1.55, p <0.001), reported John Beigel, MD, of the National Institute of Allergy and Infectious Diseases (NIAID), and colleagues. Mortality estimates by 14 days were lower for the remdesivir group compared to placebo, though nonsignificant (hazard ratio [HR] for death 0.70, 95% CI 0.47-1.04), reported researchers in the *New England Journal of Medicine*.

Social Isolation Linked with Higher Risk of Cardiovascular Events, Death

Social isolation is associated with a heightened risk of a cardiovascular event of more than 40%, and of all-cause mortality around 50%, suggests new research presented at the sixth Congress of the European Academy of Neurology (EAN) 2020 virtual/online meet.

Investigators analyzed data from 4,139 participants (age range 45-75 years [mean 59.1 years]), who were recruited into the large community-based Heinz Nixdorf Recall (HNR) study. After adjusting for age, sex, and social support, social isolation was found to be significantly associated with an increased risk of cardiovascular events (hazard ratio [HR], 1.44; 95% CI, 0.97-2.14) and all-cause mortality (HR, 1.47; 95% CI, 1.09-1.97)… *(Medscape)*

FDA Approves Solifenacin Succinate for a Form of Bladder Dysfunction in Pediatric Patients 2 Years and Above

The US FDA has approved VESIcare LS (solifenacin succinate) oral suspension for the treatment of

neurogenic detrusor overactivity (NDO), a form of bladder dysfunction related to neurological impairment, in children 2 years of age and older.

Solifenacin succinate tablets were approved in 2004 for the treatment of overactive bladder in adults 18 years and older. This is the first FDA-approved drug for NDO patients as young as two years of age… *(FDA)*

Hypertension is Closely Linked with Aldosterone Levels

A new research has revealed that people with hypertension may also have an underrecognized hormonal issue - primary aldosteronism.

A cross-sectional study of over 1,800 adults noted that urinary aldosterone levels were closely linked with hypertension. Higher stages of hypertension, including resistant hypertension, had a positive correlation across the spectrum of urinary aldosterone levels - Normotension: urinary aldosterone 6.5 μg/24 h (95% CI 5.2-7.7 μg/24 h); Stage 1 hypertension: 7.3 μg/24 h (95% CI 5.6-8.9 μg/24 h); Stage 2 hypertension: 9.5 μg/24 h (95% CI 8.2-10.8 μg/24 h); Resistant hypertension: 14.6 μg/24 h (95% CI 12.9-16.2 μg/24 h). The findings were published in *Annals of Internal Medicine*.

Single Negative Colonoscopy Predicts Low Colorectal Cancer Risk

A single negative screening colonoscopy is linked with long-lasting, significant reductions in the incidence of, and mortality from, colorectal cancer (CRC), provided the colonoscopy is of high-quality, suggests a new study published online May 25 in the *Annals of Internal Medicine*.

The population-based study demonstrated a durable reduction in CRC risk over 17.4 years of follow-up. Compared with the general population, individuals with a negative colonoscopy had a 72% lower incidence of CRC and CRC mortality was 81% lower over a period of 5.1-10 years.

New Guidance to Optimize Antipsychotic Treatment

A new consensus statement recommends monitoring antipsychotic blood levels, also known as therapeutic drug monitoring (TDM), to guide treatment decisions and optimize safety and efficacy.

The joint statement by experts from the American Society of Clinical Psychopharmacology (ASCP) and the Germany-based Therapeutic Drug Monitoring Task Force of the Arbeitsgemeinschaft für Neuropsychopharmakologie und Pharmakopsychiatrie, recommends antipsychotic TDM, especially for specific patient groups and for patients with suspected nonadherence. The guidance is published online in the *Journal of Clinical Psychiatry*.

SGLT2 Inhibitors vs. GLP-1 Agonists for Diabetes in Real-World Study

Drug adherence, health care use, medical costs and heart failure rates were found to be better among patients with type 2 diabetes who were newly prescribed a sodium-glucose cotransporter 2 (SGLT2) inhibitor compared to a glucagon-like peptide 1 (GLP-1) receptor agonist in a real-world, observational study.

Investigators stated that the findings suggest potential benefits of SGLT2 inhibitors, especially where risk related to heart failure is an important consideration. The findings were presented at the virtual American Diabetes Association (ADA) 80th Scientific Sessions… *(Medscape)*

FDA Approves Nivolumab for Second-line Esophageal Cancer

The FDA has granted approval to single-agent nivolumab as a second-line treatment for advanced esophageal squamous cell carcinoma, irrespective of PD-L1 expression.

Treatment with the drug is indicated for patients with unresectable, recurrent or metastatic disease after progression on a fluoropyrimidine- and platinum-based chemotherapy. The approval came after findings from a phase III trial, ATTRACTION-3 that randomized 419 patients with advanced esophageal squamous cell carcinoma to either nivolumab (240 mg intravenously every 2 weeks) or investigator's choice of a taxane chemotherapy. There was no difference in progression-free survival between the two study arms; median overall survival improved from 8.4 months with chemotherapy to 10.9 months with nivolumab, with the benefit seen across all subgroups and regardless of tumor PD-L1 expression (HR 0.77, 95% CI 0.62-0.96, p = 0.0189)… *(Medpage Today)*

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