# Take 3 – Practical Practice Pointers© April 15, 2019 Edition

## Allergic Rhinitis, Procalcitonin, Sugar Sweetened Beverages

## From the Guidelines and in Time for "Allergy Season"

## 1) Treatment for Allergic Rhinitis (AR)

The burden of AR is substantial. Surveys that require a physician-confirmed diagnosis of AR report prevalence rates of 14% of adults and 13% of children. Adverse consequences on patients' quality of life may include impairment in physical and/or social functioning, sleep disturbance, daytime somnolence and fatigue, depression and attention deficit, learning and memory deficits, loss of productivity, and sexual dysfunction.

AR traditionally has been categorized as being seasonal AR (SAR) or perennial (year-round) AR (PAR). AR severity can be classified as being mild (when symptoms are present but are not interfering with quality of life) or more severe (when symptoms are bad enough to interfere with quality of life).

Pharmacologic therapy for AR includes antihistamines (intranasal and oral), decongestants (intranasal and oral), corticosteroids (intranasal and oral), intranasal cromolyn, intranasal anticholinergics, and oral leukotriene receptor antagonists (LTRAs).

In 2017, the Joint Task Force on Practice Parameters led by the American Academy of Allergy, Asthma, & Immunology (AAAAI) released updated for the treatment of seasonal allergic rhinitis (SAR) in adolescents and adults. The guideline addressed three clinical scenarios: 1) Whether the combination of an oral antihistamine plus an intranasal corticosteroid (INCS) provides greater symptomatic relief than an INCS alone. 2) How the leukotriene receptor antagonist (LTRA) montelukast compares with an INCS for the treatment of moderate to severe SAR in patients who are at least 15 years of age. 3) Whether patients with SAR derive greater clinical benefit if treated with a combination of an INCS plus an intranasal antihistamine (INAH) compared with either agent alone.

Recommendations: For initial treatment of nasal symptoms of seasonal allergic rhinitis in patients ≥12 years of age, clinicians:

- Should routinely prescribe monotherapy with an intranasal corticosteroid rather than a combination of an intranasal corticosteroid with an oral antihistamine. SOR-Strong
- Should recommend an intranasal corticosteroid over a leukotriene receptor antagonist (for ≥15 years of age). SOR-Strong
- May recommend the combination of an intranasal corticosteroid and an intranasal antihistamine for moderate to severe symptoms. SOR-Weak (Note: high quality evidence of benefit, but weak recommendation due to increased cost and side-effects)

**My Comment:**
Allergy season is once again upon us (or at least, upon me personally). The guideline reinforces that intranasal corticosteroids (INCS) are the first line treatment for SAR rather than using either INCS or oral antihistamines interchangeably. Additionally, the recommendation for the addition of an intranasal antihistamine to an INCS as step

therapy is a new recommendation based on newer evidence. Below in references is a nice "Allergy Medication Guide" from the AAAAI which is worth reviewing as an update to presently available medications.

Note that there is a Mucinex product, Musinex sinus-max nasal spray, which many patients have been using for allergy symptoms. The active ingredient in this spray is oxymetazoline (similar to Afrin), NOT guaifenesin.

**Reference:**

Wallace D et al. Pharmacological Treatment of Seasonal Allergic Rhinitis. *Ann Intern Med.* 2017;167(12):876-88. Guideline
AAAAI Allergy Medication Guide: Guide Link

## From Choosing Wisely/American Society for Clinical Pathology

## 2) Procalcitonin Testing

The American Society for Clinical Pathology (ASCP) released a series of recommendations in September of 2018, including one regarding the use of procalcitonin testing. Their recommendation was:

**Don't perform Procalcitonin testing without an established, evidence-based protocol.**

Their reasoning was that procalcitonin is a biomarker that has been used successfully to identify patients with certain bacterial infections (e.g., sepsis). The appropriate use includes serial (usually daily) measurements of procalcitonin in select patient populations (e.g. patients with fever and presumed serious infection for which antibiotics were initiated). Such uses may help to identify low-risk patients with respiratory infections who would not benefit from antibiotic therapy, and to differentiate blood culture contaminants (e.g., coagulase-negative staphylococci) from true infections. When used appropriately there are significant opportunities to decrease unnecessary antimicrobial use. The overuse of antimicrobial agents is directly related to the increasing antimicrobial resistance, so judicious use of these agents is warranted.

Unfortunately, procalcitonin is often either misused (i.e. not used in the appropriate setting) or established algorithms are not followed. When the latter occurs, the procalcitonin result becomes simply another piece of laboratory data that adds costs, but does not benefit the patient. These scenarios often occur because there is not an evidence-based utilization plan established at an institution. Laboratory and intensive care unit leadership are encouraged to identify the major users of procalcitonin, to establish guidelines that are most appropriate for the local setting and to monitor use.

**My Comment:**

At some point and in the spirit of improved care and antibiotic stewardship, it would certainly be wonderful to have a rapid, inexpensive test in the ambulatory setting that could distinguish bacterial from viral infections. Procalcitonin measurement has that promise (as does CRP), BUT it is not ready for prime time in the ambulatory setting at the present time. It has certainly been found to be useful in the inpatient setting, both for initial diagnosis and for guiding discontinuation of antibiotics, often substantially decreasing total antibiotic days.

**Reference:**
Choosing Wisely/ASCP September 2018: Link

## From the AAP and the AHA

## 3) Sugar-Sweetened Beverages (SSB) and Kids

Excess consumption of added sugars, especially from sugary drinks, contributes to the high prevalence of childhood and adolescent obesity and co-morbidities from this, especially among children and adolescents who are socioeconomically vulnerable. The 2015–2020 Dietary Guidelines for Americans recommend that added sugars contribute less than 10% of total calories consumed, yet US children and adolescents report consuming 17% of their calories from added sugars, nearly half of which are from sugary drinks. Decreasing sugary drink consumption is of particular importance because sugary drinks are the leading source of added sugars in the US diet, provide little to no nutritional value, are high in energy density, and do little to increase feelings of satiety. To protect child and adolescent health, broad implementation of policy strategies to reduce sugary drink consumption is urgently needed.

On the basis of lessons learned from tobacco-control efforts (one of the greatest public health successes of the US), the American Academy of Pediatrics (AAP) and the American Heart Association (AHA) recently released policy recommendations regarding the consumption of sugar-sweetened beverage intake and opportunities to reduce it. These recommendations are targeted at federal, state, and local policy makers to improve child nutrition, and would be best implemented in conjunction with local clinician support. The recommendations include:

1. Local, state, and/or national policies to reduce added sugars consumption should include policies that raise the price of sugary drinks, such as an excise tax. Such taxes should be accompanied by an education campaign on the risks of sugary drinks and on the rationale and benefits of the tax and should be supported by stakeholders. Tax revenues should be allocated, at least in part, to reducing health and socioeconomic disparities. Metrics should be established to evaluate the impact of such a tax.
2. The federal and state governments should support efforts to decrease sugary drink marketing to children and adolescents.
3. Federal nutrition assistance programs should ensure access to healthful foods and beverages and discourage consumption of sugary drinks.
4. Children, adolescents, and their families should have ready access to credible nutrition information, including on the nutrition facts panel, restaurant menus, and advertisements.
5. Policies that make healthful beverages the default choice should be widely adopted and followed.
6. Hospitals (and other healthcare facilities – my addition) should serve as a model and implement policies to limit or disincentivize the purchase of sugary drinks.

**My Comment:**
Radical? Perhaps, but our present approach (or lack of approach) certainly isn't making inroads in the epidemic of childhood (and adult) obesity. Just recommendation #6 alone

should cause us all to take pause.  Are there vending machines in your affiliated healthcare facilities that sell these products?  If so, the question must be:  In what way does this support or detract from the mission of the organization?

We are surrounded by advertising promoting unhealthy, sweetened beverages. In fact, the soda industry is using the same strategy that Big Tobacco once used to target teens and young adults. In 2009, carbonated beverage companies reported $395 million in youth-directed marketing expenses, mainly directed at teens.  We know from the science of behavior change that this kind of environment does not make it easy to make healthy choices.  This is why, as with tobacco products, a public health solution will likely be the only effective answer to a public health problem.  Our own households, social communities, and work facilities would be a great place to start.

**Reference:**

Muth N, et al.  Policy Statement:  Public Policies to Reduce Sugary Drink Consumption in Children and Adolescents.  Pediatrics April 2019;143(4). 1-13.  Article

Feel free to forward Take 3 to your colleagues.  Glad to add them to the distribution list.

*Mark*

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