Allergy & Clinical Immunology

Seven Things Clinicians and Patients Should Question

by

Canadian Society of Allergy and Clinical Immunology

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- Don't order specific IgG testing to panels of foods.
 - The presence of IgG to a specific food indicates previous exposure not hypersensitivity. The use of methods other than serum-specific IgE evaluation or skin prick testing in diagnosing allergies is not proven and can result in inappropriate diagnosis and treatment.
- Don't order specific immunoglobin E (IgE) tests (skin or serum) unless indicated by the patient's history specific to that food.

Specific IgE to foods may be detectable when the patient is clinically tolerant. Frequent false positives lead to incorrect diagnosis of food allergies and unnecessary dietary restrictions. Appropriate diagnosis and treatment of allergies requires specific IgE testing (either skin or blood tests) based on the patient's clinical history of signs and symptoms to optimize both cost effectiveness and patient care.

Don't use antihistamines as first-line treatment in anaphylaxis.

Epinephrine is the drug of choice to treat anaphylaxis. Overuse of antihistamines in anaphylaxis is associated with increased morbidity. H1 antagonists serve as second-line treatment for cutaneous non-life-threatening symptoms such as urticaria but should not be used in place of epinephrine. They do not alleviate or prevent cardiovascular or respiratory symptoms of anaphylaxis and can delay the administration of epinephrine, increasing the risk of potential consequences such as disability or fatality. Prompt use of epinephrine is important for the emergency treatment of anaphylaxis.

Don't diagnose or manage current or chronic or persistent asthma in patients >6 years of age without objective testing such as spirometry or a methacholine challenge.

Findings on a patient's history and physical exam such as cough, wheeze and dyspnea may be caused by many conditions, including asthma. When the diagnosis of current or persistent asthma is suspected it must be confirmed with objective testing, as up to one third of patients with suspected asthma show no objective evidence when later tested and may have went into sustained clinical remission or never had asthma. Misdiagnosis leads to delayed treatment of the underlying condition and unnecessary exposure to medication side effects. Objective methods of confirming the diagnosis of asthma in patients in whom asthma is suspected should be used such as spirometry, methacholine challenge, exercise challenge or peak flow variability. These tests may be normal when on treatment.

Don't prescribe antibiotics for uncomplicated acute rhinosinusitis.

Viral infections are the primary cause of acute rhinosinusitis, whereby only 0.5% to 2% develop into bacterial infections. Most cases of clinically diagnosed acute rhinosinusitis improve without treatment within two weeks. For those with uncomplicated acute rhinosinusitis, who have a mild illness, observation without use of antibiotics is recommended. If a decision is made to treat, clinicians should prescribe amoxicillin as first-line antibiotic therapy for most cases of acute rhinosinusitis.

Don't order sinus computed tomography (CT) for uncomplicated acute rhinosinusitis.

Abnormal images of the sinuses cannot stand alone as diagnostic evidence of bacterial rhinosinusitis. Radiologic changes such as mucosal thickening are present in most cases of acute viral infections of the upper respiratory tract when sensitive detection methods such as CT scanning are used. Incidental findings of mucosal thickening can also be seen in a high percentage of asymptomatic individuals.



Don't order non-beta lactam antibiotics in patients with a history of penicillin allergy, without an appropriate evaluation.

While a history of penicillin allergy is self-reported by approximately 6-25% of patients, most are able to tolerate penicillin. In those with penicillin allergy, it may remit over time. Patients deemed 'penicillin-allergic' are more likely to: be treated with broad-spectrum alternative antibiotics (such as vancomycin, quinolones and clindamycin); experience longer hospital stays; and develop complications such as infections with methicillin-resistant Staphylococcus aureus, vancomycin-resistant Enterococcus, and Clostridium difficile. IgE-mediated penicillin allergy can be evaluated through skin testing or graded oral challenge.

How the list was created

The CSACI president created a task force to lead work on Choosing Wisely. Through multiple society notifications, CSACI members were invited to offer feedback and recommend elements to be included in the list. A targeted email was also sent to an extended group of CSACI leadership inviting them to participate. The work group reviewed the submissions to ensure the best science in the specialty was included. Suggested elements were considered for appropriateness, relevance to the core of the specialty, potential overuse of resources and opportunities to improve patient care. They were further refined to maximize impact and eliminate overlap, and then ranked in order of potential importance both for the specialty and for the public. Finally, the work group chose its top recommendations which were then approved by the Executive Committee.

The CSACI's disclosure and conflict of interest policy can be found at www.csaci.ca.

Sources

Bernstein IL, Li JT, Bernstein DI, et al. Allergy diagnostic testing: an updated practice parameter. Ann Allergy Asthma Immunol. 2008 Mar;100:S1–148. PMID: 18431959.

Carr S, Chan E, Lavine E, et al. CSACI Position statement on the testing of food-specific IgG.

Allergy Asthma Clin Immunol. 2012 Jul;8(1):12. PMID: 22835332.

Cox L, Williams B, Sicherer S, et al. Pearls and pitfalls of allergy diagnostic testing: report from the American College of Allergy, Asthma and Immunology/American Academy of Allergy, Asthma & Immunology Specific IgE Test Task Force. Ann All Asthma Immunol. 2008 Dec; 101(6):580–592. PMID: 19119701. Stapel SO, Asero R, Ballmer-Weber BK, et al. Testing for IgG4 against foods is not recommended as a diagnostic tool: EAACI Task Force Report. Allergy. 2008 Jul;63(7):793-796. PMID: 18489614.

2 Bernstein IL, Li JT, Bernstein DI, et al. Allergy diagnostic testing: an updated practice parameter. Ann Allergy Asthma Immunol. 2008 Mar;100:S1–148. PMID: 18431959.

NIAID-Sponsored Expert Panel: Boyce JA, Assa'ad A, Burks AW, et al. Guidelines for the diagnosis and management of food allergy in the United States: report of the NIAID-sponsored expert panel. J Allergy Clin Immunol. 2010 Dec;126(6 Suppl):S1-58. PMID: 21134576. Sicherer SH, Wood RA, et al. Allergy Testing in Childhood: Using Allergen-Specific IgE Tests, Pediatrics. 2012 Jan;129(1):193-197. PMID: 22201146.

3 Andreae DA, Andreae MH. Should Antihistamines be Used to Treat Anaphylaxis? BMJ. 2009 Jul;339:b2489. [Internet]. Cox L, Nelson H, Lockey R, et al. Allergen immunotherapy: a practice parameter third update, J Allergy Clin Immunol. 2011 Jan;127(1 Suppl):s1–55. PMID: 21122901.

Fineman SM. Optimal Treatment of Anaphylaxis: Antihistamines Versus Epinephrine. Postgrad Med. 2014 Jul;126(4):73-81. PMID: 25141245. Finnerup NB, et al. Pharmacotherapy for neuropathic pain in adults: a systematic review and meta-analysis. Lancet Neurol. 2015 Feb;14(2):162-73. PMID: 25575710

Kemp SF, Lockey RF, Simons FE, et al. Epinephrine the drug of choice for anaphylaxis. A statement of the World Allergy Organization. Allergy. 2008 Aug;63(8):1061–70. PMID: 18691308.

Lieberman P, Nicklas RA, Randolph C, et al. Anaphylaxis - a practice parameter update 2015. Ann Allergy Asthma Immunol. 2015 Nov;115(5):341-84. PMID: 26505932.

Sheikh A, Ten Broek V, Brown SG, et al. H1-antihistamines for the treatment of anaphylaxis. Allergy. 2007 Aug;62(8):830-837. PMID: 17620060.

Aaron SD, Vandemheen KL, FitzGerald JM, et al. Reevaluation of Diagnosis in Adults With Physician-Diagnosed Asthma. JAMA. 2017 Jan;317(3):269-279. PMID: 28114551.

Bateman ED, Hurd SS, Barnes PJ, et al. Global strategy for asthma management and prevention: GINA executive summary. Eur Respir J. 2008 Jan;31:143–178. PMID: 18166595.

Dahl R, Nielsen LP, Kips J, Foresi A, Cauwenberge P, Tudoric N, Howarth P, Richards DH, Williams M, Pauwels R; SPIRA Study Group. Intranasal and inhaled fluticasone propionate for pollen-induced rhinitis and asthma. Allergy. 2005 Jul;60(7):875-81. PMID: 15932376.

Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. Updated 2018. [cited 30th July 2018]. [Internet].

Lougheed MD, Lemiere C, Ducharme FM, et al; Canadian Thoracic Society Asthma Clinical Assembly. Canadian Thoracic Society 2012 guideline update: Diagnosis and management of asthma in preschoolers, children and adults. Can Respir J. 2012;19(2):127-164. PMID: 22536582.

6 Ahovuo-Saloranta A, Rautakorpi UM, Borisenko OV, et al. Antibiotics for acute maxillary sinusitis in adults. Cochrane Database Syst Rev. 2014 Feb;(2):CD000243. PMID: 24515610.

Peters AT, Spector S, Hsu J, et al. Diagnosis and management of rhinosinusitis: a practice parameter update. Ann Allergy Asthma Immunol.2014 Oct;113(4):347-385. PMID: 25256029.

Rosenfeld RM, Piccirillo JF, Chandrasekhar SS, et al. Clinical practice guideline (update): adult sinusitis. Otolaryngol Head Neck Surg. 2015 Apr;152(2 Suppl):S1-S39. PMID: 25832968.

Desrosiers M, Evans GA, Keith PK, Wright ED, Kaplan A, Bouchard J, Ciavarella A, Doyle PW, Javer AR, Leith ES, Mukherji A, Robert Schellenberg R, Small P, Witterick IJ. Canadian clinical practice guidelines for acute and chronic rhinosinusitis. Allergy Asthma Clin Immunol. 2011; 7(1): 2. PMID: 21310056. Kirsch CF, Bykowski J, Aulino J, et al. Expert Panel on Neurologic Imaging: ACR Appropriateness Criteria® for Sinonasal Disease. J Am Coll Radiol. 2017 Nov;14(11S):S550-S559. PMID: 29101992.

Rosenfeld RM, Piccirillo JF, Chandrasekhar SS, et al. Clinical practice guideline (update): adult sinusitis. Otolaryngol Head Neck Surg. 2015 Apr;152(2 Suppl):S1-S39. PMID: 25832968.

Young J, Bucher H, Tschudi P, Periat P, Hugenschmidt C, Welge-Lussen A. The clinical diagnosis of acute bacterial rhinosinusitis in general practice and its therapeutic consequences. J Clin Epidemiol. 2003;56:377–384. PMID: 12767415.



Abrams EM, Ben-Shoshan M. Delabeling penicillin allergy: Is skin testing required at all? J Allergy Clin Immunol Pract. 2019 Apr;7(4):1377. PMID: 30961847.

Castells M, Khan DA, Phillips EJ, et al. Penicillin Allergy. N Engl J Med. 2019 Dec 12;381(24):2338-2351. PMID: 31826341.

Chen JR, Tarver SA, Alvarez KS et al. A Proactive Approach to Penicillin Allergy Testing in Hospitalized Patients. J Allergy Clin Immunol Pract. 2017 May;5(3):686-693. PMID: 27888034.

Macy E, Contreras R. Healthcare Utilization Use and Serious Infection Prevalence Associated with Penicillin "Allergy" In Hospitalized Patients: A Cohort Study. J Allergy Clin Immunol. 2014 Mar; 133(3). PMID: 24188976.

Park MA, Markus PJ, Matesic D, et al. Safety and effectiveness of a preoperative allergy clinic in decreasing vancomycin use in patients with a history of penicillin allergy. Ann Allergy Asthma Immunol. 2006 Nov;97(5):681–687. PMID: 17165279.

Penicillin Allergy in Antibiotic Resistance Workgroup. Penicillin Allergy Testing Should Be Performed Routinely in Patients with Self-Reported Penicillin Allergy. J Allergy Clin Immunol Pract. 2017 Mar; 5(2):333-334. PMID: 28283158.

Solensky R. Penicillin allergy as a public health measure. J Allergy Clin Immunol. 2014 Mar;133(3):797-798.

Solensky R, Khan DA. Drug Allergy: An Updated Practice Parameter. Ann Allergy Asthma Immunol. 2010 Oct;105(4):259-73. PMID: 20934625.

About the Canadian Society of Allergy and Clinical Immunology

The Canadian Society of Allergy & Clinical Immunology (CSACI) represents allergists, asthma specialists, clinical immunologists, allied health professionals, and others with a special interest in the research and treatment of allergic and immunologic diseases. The Canadian Society of Allergy and Clinical Immunology is one of the oldest specialty societies in Canada. It was founded in 1945 as the Canadian Society for the Study of Allergy and changed its name in 1954 to the Canadian Academy of Allergy. In 1967, it adopted the present name, The Canadian Society of Allergy and Clinical Immunology (CSACI).





For more information or questions, please visit www.csaci.ca.

About Choosing Wisely Canada

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. One of its important functions is to help clinicians and patients engage in conversations that lead to smart and effective care choices.

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