Giant Cell Arteritis, Safe Drinking Water, Mastitis, Flu Vaccine

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GIANT CELL ARTERITIS IN PRIMARY CARE

Years ago, my father came to visit me on a holiday and described symptoms of giant cell arteritis (GCA). With the help of friend and colleague David Newcomer, MD, we quickly made the diagnosis and got my father started with treatment even before results of his temporal artery biopsy were reported.

While vasculitis remains rare, GCA can be an urgent priority for clinicians who practice in the primary care setting. Vision loss can occur in about 20% of untreated cases, so early detection is vital.[1]

Clinical manifestations of the condition include headaches, jaw pain, fatigue, and scalp tenderness. Patients may also present with symptoms of polymyalgia rheumatica that include pain and stiffness in the shoulders and hip girdle. An estimated 10 cases per 100,000 occur in people older than age 50 years, but rates are higher among patients with Scandinavian ancestry.

Early identification is important to prevent serious complications such as vision loss, blood clots, and aneurysms. The vision loss can become permanent if left untreated.

A workup of potential GCA should rule out malignancy, infection, or stroke. About 5% of patients with the condition have normal erythrocyte sedimentation rate and C-reactive protein, as was the case with my dad.

Imaging may show characteristic vascular inflammation, especially in the temporal, axillary, and carotid arteries, which can have a distinctive dark halo sign on ultrasound. A positive temporal artery biopsy is definitive for diagnosis, but a negative one does not rule out disease.

Patients are usually best served with close management by a rheumatologist, followed by monitoring by a primary care clinician, depending on the course of the illness. Patients with the condition are immunosuppressed, so primary care clinicians should monitor for infection and ensure that patients have received their recommended vaccines.

Patients should start treatment with glucocorticoids immediately to avoid vision loss. Long-term treatment of the condition with glucocorticoids calls for monitoring of a range of clinical factors including blood pressure, glycemic control, bone density, and gastrointestinal concerns.

Two newer agents are available, and use of these can lead to quicker tapers and a significant reduction in total steroid exposure. One is tocilizumab, an interleukin-6 receptor alpha inhibitor, which can be delivered by a weekly injection or a monthly infusion. It reduces acute phase reactants, so these lab values cannot be used to monitor disease activity.

The second agent is upadacitinib, an oral JAK inhibitor. The only oral targeted therapy approved as of last year, it was superior to placebo with regard to sustaining glucocorticoid-free disease remission after one year. It does have a black box warning because it can result in an increased risk for major cardiovascular events such as myocardial infarction and cerebrovascular accident. Use of this drug has also been associated with a high risk of herpes zoster, so patients should receive the shingles vaccine prior to starting the drug.

INTEGRATING DRINKING WATER SAFETY INTO ROUTINE PRACTICE

Asking about sources of drinking water during prenatal visits, well-child checks, and wellness examinations can uncover hazards that patients might not expect.

"Safe drinking water is essential to human health yet is often overlooked in routine clinical care," writes the Mayo Clinic's Dominika Jegen, MD, in *American Family Physician.*[2] Per the article:

> Approximately 85% of the U.S. population receives drinking water from regulated public water systems, whereas about 15% rely on private wells ... [which] receive no federal oversight; this lack of regulation affects 43 million people in the United States who rely on well water. Unless homeowners test their own water supply, no monitoring occurs.[3]

There are many health risks linked with unsafe drinking water, including risks of arsenic and nitrates to pregnant patients and infants. Guidance for how

clinicians can discuss drinking water with patients can be found by scanning the QR code at right.

Related Resource

The National Sanitation Foundation certifies drinking water filters for removal of specific contaminants. Visit nsf.org for more information.

BREAST INFECTION GUIDELINES: MANAGING MASTITIS AND BREAST ABSCESSES

Clinicians should distinguish between infectious and noninfectious lactational mastitis (LM), as the former often requires interventions whereas the latter requires only supportive care.[4]

Patients with infectious LM often have thick fluid collections that are not amenable to aspiration and usually require a stab incision and drain placement — but no packing — to resolve the infection. Operative drainage is only required if the patient cannot tolerate an office-based procedure.

If phlegmon is present, antibiotics should be prescribed for at least 10 days. A diagnosis of granulomatous mastitis (GM) requires pathological confirmation of characteristic findings that can be seen on core biopsy.

Cystic neutrophilic granulomatous mastitis is a specific form of GM associated with a granulomatous reaction to *Corynebacterium* infection and should be empirically treated with doxycycline. For patients without characteristic findings of cystic neutrophilic granulomatous mastitis and no other associated bacterium identified, there is no role for empiric antibiotic use.

Granulomatous mastitis cases often recur and can take up to 18 months to resolve. Patients who have GM cases with worsening symptoms should be treated with repeated intralesional steroid injections; surgical excision or repeated aspirations should be avoided. Cases refractory to intralesional steroid injection may require oral steroids or even advanced biologic agents such as methotrexate or azathioprine.

Periductal mastitis with squamous metaplasia of lactiferous ducts (PDM-SMOLD) is a distinct entity from other periductal mastitis cases that can present with recurrent abscesses and should be treated with antibiotics and aspiration of fluid collections. Operative excision of PDM-SMOLD is required for those patients who present with a fistula or recurrent episodes, typically using a radical incision to remove the diseased ducts within and below the nipple.

HIGH-DOSE INACTIVATED FLU VACCINE LOWERS DEMENTIA RISK IN OLDER ADULTS

For people aged 65 years and older, the risk for incident Alzheimer dementia (AD) is lower among those who received a high dose versus a standard dose of inactivated influenza vaccine (IIV), according to a study published online in *Neurology*.[5]

The authors conducted a retrospective cohort study using data from 2014 to 2019 from the IQVIA PharMetrics Plus for Academics database to examine the risk for AD among adults aged 65 years and older after high-dose IIV versus standard-dose IIV. The researchers observed an association between receipt of high-dose IIV and decreased risk of developing AD during months 1 to 25 post-vaccination (minimum number needed to treat, 185.2 at 25 months). The risk reduction persisted longer in women than men after six stratifications.

Understanding the mechanisms through which influenza vaccines and immunogenic enhancements influence AD pathology and presentation could inform the targeted interventions and public health strategies to mitigate the growing population burden of AD.

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