

Raynaud's-like symptoms induced by prescription medication

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Raynaud's disease is a common vasospastic and vasodilatory condition which affects the digits of the hands and feet. This is a diagnosis commonly seen by foot and ankle specialists who are treating patients in cooler climates. This case report presents a 60-year-old female with Raynaud's-like symptoms caused by one of the prescription medications she used. This is a lesser known etiology of Raynaud's disease which should be included in the physician's differential diagnosis as they approach and treat this condition.

Keywords: Medication-induced, Raynaud's disease

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Raynaud's disease is a painful vasospastic and vasodilatory process which can affect both the digits of the hands and feet. The condition occurs more frequently in women. Higher estrogen levels in women lead to greater vascular reactivity to cold temperatures. While 3-5% of the general population are affected by Raynaud's disease, as high as 15% of women between the ages of 15-40 years old have been shown to have Raynaud's disease [1]. Typically, the patient presents with a varying white blanching (representing the ischemic phase), then blue (from cyanosis due to the deoxygenated blood), then red color (representing a reactive hyperemia) to the toes [2]. This condition can cause blistering, eschar formation and, in severe cases, even tissue necrosis. Oral agents, like nifedipine and diltiazem, or topical agents, like nifedipine and nitroglycerin, along with warming measures can help reduce symptoms associated with this disease state. Physicians located in cooler climates often see the onset of this condition as the weather turns colder through the fall and winter.

Raynaud's can also occur in warmer months when rapid drops in temperature occur, or with the sudden onset of damp, cool weather. Furthermore, the condition can be provoked in a clinical situation by a "cold challenge", where the physician puts the patient in contact with cold water or cold air. Additionally, some patients develop Raynaud's disease due to stressful circumstances or tobacco use. As in this case report, some medications have been found to trigger Raynaud's-like symptoms. Medications which have caused Raynaud's like symptoms include; Beta blockers, attention-deficit/hyperactivity disorder (ADHD) drugs, over-the-counter cold remedies, migraine medications (containing ergotamine or sumatriptan) and chemotherapy drugs [3,4].

Case Report

A 60-year-old white female was referred to a clinic in the Blue Ridge Mountains by her primary care physician in mid-January for a chief complaint of pain and "pins and needle" feelings, as well as, great discoloration of the skin in her toes.

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She was relatively healthy overall. Medications used included estradiol, citalopram, and dextroamphetamine. Past surgical history was significant for tubal ligation and hysterectomy. She had no known drug allergies, a non-contributory family history, and did not use tobacco or alcohol.

Clinically, the 1-5 toes bilaterally had discoloration which vacillated in color from white to purple to reddish throughout the toes during the examination. The distal tips of the digits were a darker purple-red color. No blistering or drainage was noted, but the patient related that about a year previous to the exam, the symptoms were severe enough to cause blistering and lysis of the toenail at the right fourth toe. Radiographs were obtained bilaterally, and other than mild hammertoe contractures of the proximal interphalangeal joints in digits 2-4, were unremarkable.

As the clinic is in the Blue Ridge Mountains, during the colder months, many patients present with Raynaud's-like symptoms. The physician diagnosed this patient with cold-induced Raynaud's disease and prescribed standard treatment measures including warming of the digits with socks/shoes, discussion of ordering arthritic bloodwork if the condition persisted, and a prescription for topical nifedipine 5%/ lidocaine 2.5%/ prilocaine 2.5% cream to be applied four times daily. The patient was reappointed for follow-up in 2 weeks.

Ten days later, the patient called the physician relating great improvement in symptoms with the topical cream. She also related that she read the package insert for her dextroamphetamine that she took for ADHD, and that it mentioned Raynaud's-like symptoms as a potential side effect of the drug. She told the physician that she wanted to discontinue the nifedipine cream, and then a few weeks later after the symptoms returned, stop the dextroamphetamine to see if the symptoms would resolve with the discontinuation of the ADHD drug.

The author utilized the primary care physician to properly have the patient discontinue the dextroamphetamine. After only a short period of time off the medication, the Raynaud's-like symptoms completely resolved. The author has followed up with the patient for a year.

The patient has not had any return of the Raynaud's-like symptoms except when she has occasionally used her dextroamphetamine, which does temporarily flare up the symptoms while she uses the medication.

Discussion

Raynaud's disease is a common and painful vasospastic/vasodilatory condition affecting the toes which commonly presents to foot and ankle specialists. This article is pertinent to expand the clinician's knowledge in regard to the possible etiologies of the condition. Specifically, to make more physicians aware of the common medications that can induce Raynaud's-like symptoms. In this case, dextroamphetamine was the offending medication. According to the FDA drug safety labelling for dextroamphetamine, the physiologic process occurring is that the dextroamphetamine induces vasoconstriction which leads to the peripheral vasculopathy [4]. As warming measures are often just as effective as topical and oral vasodilatory medications are in alleviating the symptoms of Raynaud's disease, it certainly behooves the clinician to be aware of the less frequent causes of Raynaud's disease, such as medications that can induce the disorder, so as to aid the patient in remedying this problem.

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