The Christmas tree cataract’s classic presentation includes small needle-like, multicolored crystals within the deep cortex of the crystalline lens (Figure). These refractile opacities can be found in a variety of colors, including red, green (hence the name), blue, pink, and gold.1–3 This type of cataract is most commonly related to an accelerated breakdown of denatured proteins induced by elevated calcium levels in the lens. Peptides and amino acids accumulate in the reticular meshwork of the lens, and cysteine is concentrated to a level at which crystallization occurs.2,3 It’s essentially a kidney stone inside the eye. Although these cataracts are often not visually significant, they can progress and impair vision.

The typical preceptor quiz question regarding Christmas tree cataracts references their association with autosomal-dominant myotonic dystrophy (DM). There are two main types: DM1 and DM2. There is an extremely broad spectrum of manifestations and disease severity in DM.4 Approximately 75% of patients develop symptoms between the second and fourth decade. The most common initial symptom is myotonia or delayed relaxation (prolonged contraction) of skeletal muscles.4

A retrospective review of 23 patients with DM1 revealed the presence of Christmas tree cataract in 13 patients (56%).2 They were unilateral in 10 of the 13 patients and bilateral in three. Average age of diagnosis was 47 years. The cataract was the first sign of the disease for 11 patients and was detected during a routine eye examination.2 There was an abnormally large interval between diagnosis of the cataract and DM (10 years). This delay was explained by the fact that none of the patients presented with any of the typical symptoms of DM when the cataract was diagnosed.2

Christmas tree cataracts are typically detected in nearly all patients with DM1; however, only 16.7% of individuals with Christmas tree cataracts are diagnosed with DM1.4 In other words, most Christmas tree cataracts are idiopathic, but they are extremely common in patients diagnosed with DM.

Other manifestations and associations of DM include cardiac dysrhythmia, gastrointestinal symptoms, higher risk of cancer, primary hypogonadism, insulin resistance, increased cholesterol and hypertriglyceridemia, abnormal liver function test, and balding.

Referral for neuromuscular assessment when the beautiful disaster of a Christmas tree cataract is discovered could possibly speed up the diagnosis and treatment of DM, a complicated systemic condition with ocular manifestations.

JACOB LANG, OD, FAAO, DIPL ABO
- Lead Optometrist and Residency Coordinator, Associated Eye Care, Stillwater, Minnesota
- Member, Modern Optometry Editorial Advisory Board
drjakelang@gmail.com; Instagram @seeoneteachone
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