

Bilateral Christmas Tree Cataract

Mohcine El Mhadi*, Azize El Ouafi and Said Iferkhas

Ophthalmology Department of the military hospital Moulay Ismail of Meknes, Morocco

*Corresponding author: Mohcine El Mhadi, Ophthalmology department of the military hospital Moulay Ismail of Meknes, Morocco

Received: 📅 December 12, 2022

Published: 📅 December 16, 2022

Abstract

We report a case of a 75-year old patient with no particular past medical history, presenting with progressive bilateral blurred vision. Ophthalmologic examination showed multicolored sparkling opacities in the crystalline lens in both eyes. Direct focal lighting objectified a range of highly refractive, polychromatic needle-like opacities that crossed the deep cortex and the nucleus of the crystalline lens, appearing as colored lights decorating a Christmas tree. The rest of the biomicroscopic examination was normal. The diagnosis of Christmas tree cataract was made. Christmas tree cataract is rare and is characterized by small, reflective, polychromatic, needle-shaped deposits in the deep cortex and nucleus. 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. It's essentially a kidney stone inside the eye.

Most Christmas tree cataracts are idiopathic, but they are extremely common in patients diagnosed with type 1 myotonic dystrophy in which the deposits are smaller.

Keywords: Cataract; Christmas Tree; Polychromatic Deposits; Calcium; Cysteine

Clinical Image

This study reports the case of a 75-year-old patient with no particular past medical history, presenting progressive bilateral blurred vision. His best visual acuity was 8/10 in the right eye and 9/10 in the left eye.

Ophthalmologic examination with dilated pupil showed multicolored sparkling opacities in the crystalline lens of both eyes.

Direct focal lighting objectified a range of highly refractive, polychromatic needle-like opacities that crossed the deep cortex and the nucleus of the crystalline lens, appearing as colored lights decorating a Christmas tree (Figure 1). The rest of the biomicroscopic examination was normal. The diagnosis of Christmas tree cataract was made, because the cataract did not cause a significant decrease in vision, it was not removed but monitored for progression.

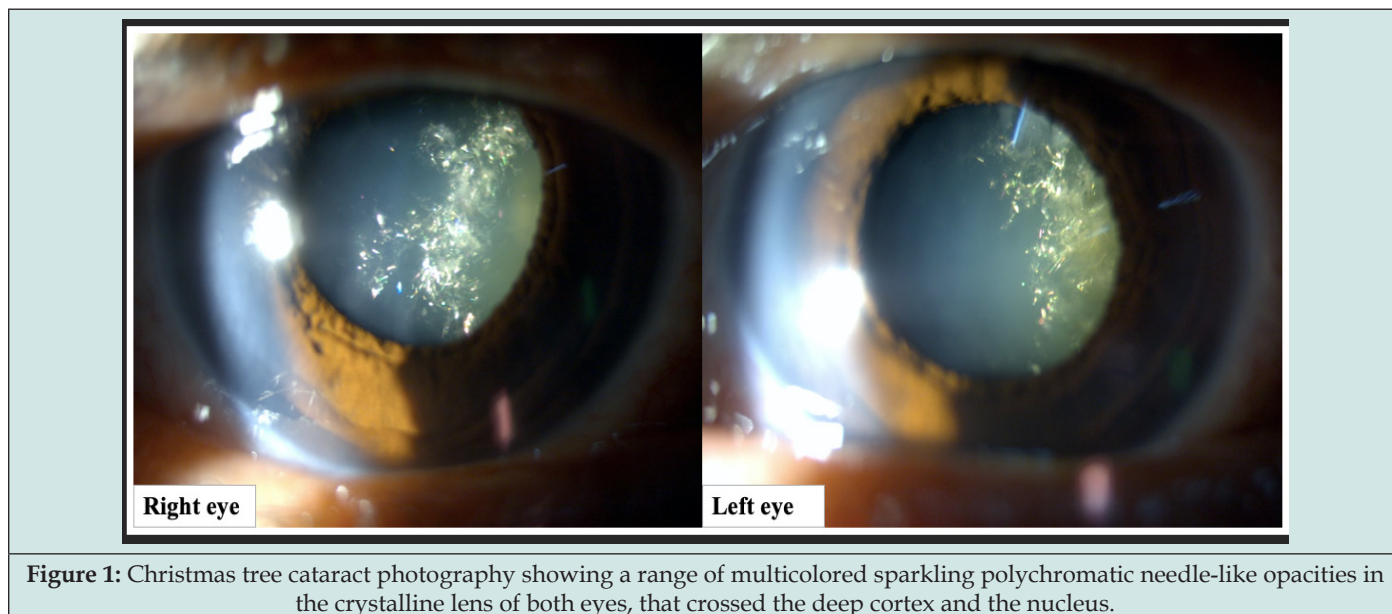


Figure 1: Christmas tree cataract photography showing a range of multicolored sparkling polychromatic needle-like opacities in the crystalline lens of both eyes, that crossed the deep cortex and the nucleus.

Christmas tree cataract is a rare form of cataract in elderly patients. The clinical appearance is quite typical, with the colors of the crystals that vary according to the angle of the incident light; which suggests that it is a diffractive phenomenon. 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. It's essentially a kidney stone inside the eye. Although these cataracts are often not visually significant, they can progress and impair vision. Most Christmas tree cataracts are idiopathic, but they are extremely common in patients diagnosed with type 1 myotonic dystrophy in which the deposits are smaller.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Article](#)

DOI: [10.32474/TOOAJ.2022.03.000171](https://doi.org/10.32474/TOOAJ.2022.03.000171)

TOOAJ

Trends in Ophthalmology
Open Access Journal



Trends in Ophthalmology:
Open Access Journal

Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles