Photo Essay

Artistic Iris: A Case of Congenital Sectoral Heterochromia Iridis

Mandeep Tomar, MS; Richa Dhiman, MS; Gaurav Sharma, MS; Nishita Yadav, MS

Department of Ophthalmology, Dr. RPGMC, Tanda, Kangra, Himachal Pradesh, India

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PRESENTATION

A 47-year-old male presented for a routine eye checkup. His visual acuity was 6/6, pupils were reactive to light, he had a full range of ocular movements, and ocular adnexa were normal with normal fundus examination. Heterochromia iridis was present and involved both eyes [Figure 1]. Amber- and white-colored patches were visible in the iris, giving an artistic appearance to the iris [Figure 2]. The left eye had segmental dark brown-, light brown- and white-colored patches in the superior quadrant of the iris [Figure 3]. There was no history of any ocular trauma or any topical or systemic drug intake in the past. On enquiring about his family history, his mother and one of his sisters also had similarly colored irises, while the other two siblings were unaffected (one brother and one sister). Furthermore, among his two children, his daughter was affected, and his son was unaffected by this condition. To perform a complete examination of his family members, he was urged to bring them on his next visit. Unfortunately, they never returned despite repeatedly contacting them.

DISCUSSION

Heterochromia iridis or heterochromia iridum may be inherited, or caused by genetic mosaicism, chimerism, disease, or injury.[1] Heterochromia that is congenital is usually inherited as an autosomal dominant trait and comprises three types. In complete heterochromia, one iris is of a different color from the other. In sectoral heterochromia, part of one iris is a different color from its remainder, and in central heterochromia, spikes of different colors radiate from the pupil.

Iris color is determined primarily by the concentration and distribution of melanin.[2,3] The affected eye may be hyperchromic or hypochromic.[4] This is due to a mutation in the genes that determine melanin distribution in the 8-HTP (hydroxyl tryptophan) pathway, which usually occurs due to chromosomal homogeneity.[4]

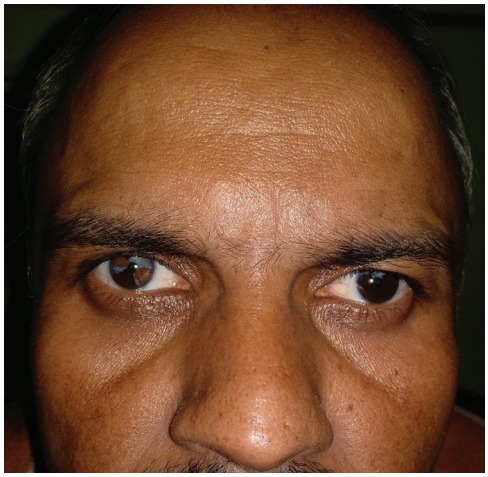

Figure 1. Heterochromia iridum is shown.

Correspondence to:
Mandeep Tomar, MS. Department of Ophthalmology, DR. RPGMC, Tanda, Kangra, Himachal Pradesh 176001, India.
E-mail: sunnyigmc85@gmail.com

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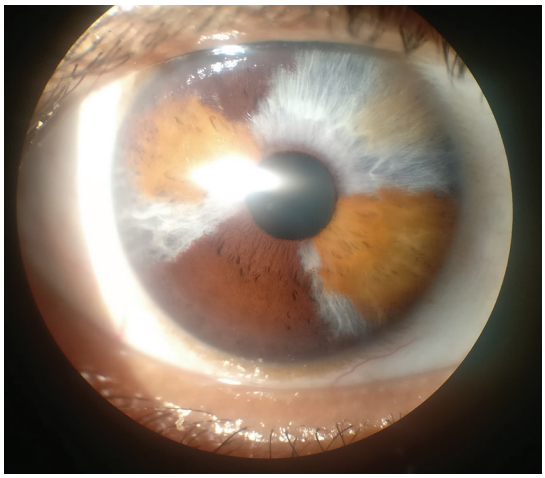

Figure 2. Segmental heterochromia iridis in the right eye.

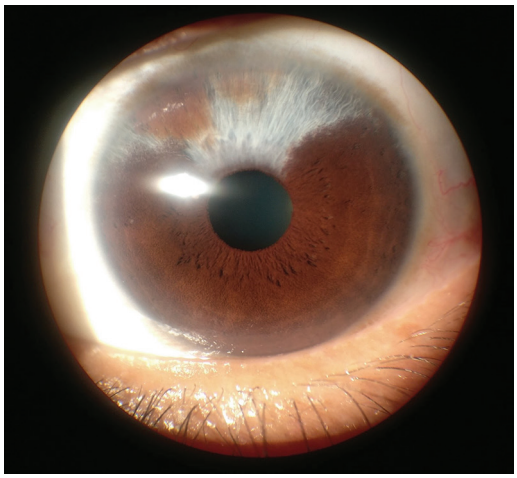

Figure 3. Segmental heterochromia iridis involving the left eye.

Thus, this was likely a case of inherited autosomal dominant sectoral type heterochromia iridum in a male patient, involving three generations of his family, giving the appearance of a crafted iris in his both eyes.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given his consent for his images and other clinical information to be reported in the journal. The patients understand that his name and initial will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of Interest

There are no conflicts of interest.

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