Appendix 1. Retinal phenotypes and associated findings described with different mutations in *OTX2.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Refer-ence | Gen-der | DNA mutation | Protein mutation | Exon | De novo mut. | Age at mostrecent assessment | Optic disc | Macula | Retina | Pituitary gland status | Other features | Refractive error (RE: LE) | ERG |
|  [12] | M | c.413C>G, stop mutation | S138X |  | Y | 7 | Hyperpigmented peripapillary ring | Fine, granular RPE pigmentation throughout fundus | Early onset retinal dystrophy. No vascular attentuation | WNL | Failure to thrive, growth hormone deficiency, mild torsional nystagmus, small angle alternating esotropia. | +3.00x180: +3.00 x180 | Rods ↓↓Cones↓ |
|  [13] | M | c.708T>A | Y179X | 3 | N | 25 | Pale | Atrophic | LCA.Thin vessels, mid periphery clumps | WNL | Mild bilateral microphthalmia (20mm OU), anterior synechiae OU, Nystagmus, mild learning disabilities |  |  |
|  [13] | F | c.708T>A | Gonosomal mosaic for the Y179X mutation | 3 | Y | 51 | Hyperpigmented peripapillary crescentic ring | WNL | Pigmentary retinopathy.Accumulated pigment clumps in nasal retina | WNL | This patient is the mildly affected mosaic mother of the patient in the row above.Later-onset, progressive retinal phenotype. No structural eye defects. |  |  |
|  [8] | M | c.235G>A | E79K | 4 |  | 46 | Optic nerve head dysplasia | Pattern dystrophy | WNL | Normal pituitary hormone levels | Rathke’s cleft cyst | -3.25 -0.75 x180:-2.25 | Rods ↓Cones↓ |
|  [8] | M | c.235G>A | E79K | 4 |  | 46 | Optic nerve head dysplasia | Pattern dystrophy | WNL | Normal pituitary hormone levels |  | -3.75:-2.75 | Rods – normalCones – normal |
|  [8] | F | c.235G>A | E79K | 4 |  | 13 | Optic nerve head dysplasia | Annular pigmentary pattern | WNL | Normal pituitary hormone levels |  | -3.50:-3.50 | Rods – normalCones ↓ |
|  [8] | F | c.235G>A | E79K | 4 |  | 10 | Normal | Pattern dystrophy | WNL | Normal pituitary hormone levels |  | -0.50 -2.00 x 180:-0.50 -2.00 x180 | Rods – normalCones – normal |
|  [8] | F | c.235G>A | E79K | 4 |  | 13 | Normal | Dull foveal reflex | WNL | Normal pituitary hormone levels |  | -1.75 -1.00 x 90: -1.75 -1.00 x 90 | Rods – normalCones – normal |
|  [8] | M | c.235G>A | E79K | 4 |  | 39 | Optic nerve head dysplasia | Atypical mild RPE alterations | WNL | Normal pituitary hormone levels | Posterior embryotoxon and microcornea | -8.00 -3.00 x 170: -9.00 -2.00 x 180 |  |
|  [8] | F | c.235G>A | E79K | 4 |  | 8 | Normal | Grouped pigmentary pattern | WNL | Normal pituitary hormone levels | Nystagmus | -2.50:-2.75 | Rods ↓Cones↓ |
| This study | M | c.485delC | p.Pro162G.Infs\*24 | 5 | N | 17 | Normal | Atypical maculopathy with intraretinal hyperreflective lesions. | Mid peripheral pigmentation with mild arteriolar attenuation | Human Growth Hormone normal level | Bilateral microphthalmia (17.98mm RE, 17.88mm LE). Congenital hip dislocation, had surgery with titanium screws in the left side of the hip | +6.50: +6.50 | Rods ↓↓↓ Cones ↓↓ |

LCA=Leber congenital amaurosis. WNL=within normal limit. RE=Right eye. LE=Left eye.