

Asymptomatic familial bilateral severe retinal vascular tortuosity

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A 15-year-old girl and her 40-year-old mother presented with abnormal fundi, with significant tortuosity of the retinal vessels in both eyes. They were asymptomatic and had no other abnormal findings. Furthermore, systemic complications were not confirmed. Familial retinal arteriolar tortuosity (FRAT) is a rare hereditary disease that is very similar to that observed in our patients. The condition of our patients differs from FRAT in that it was accompanied by severe venous tortuosity. No similar cases have been previously reported. We suggested precise examination, but the mother chose not to undergo further examination and thus we continued careful monitoring ([Fig. 1](#)).

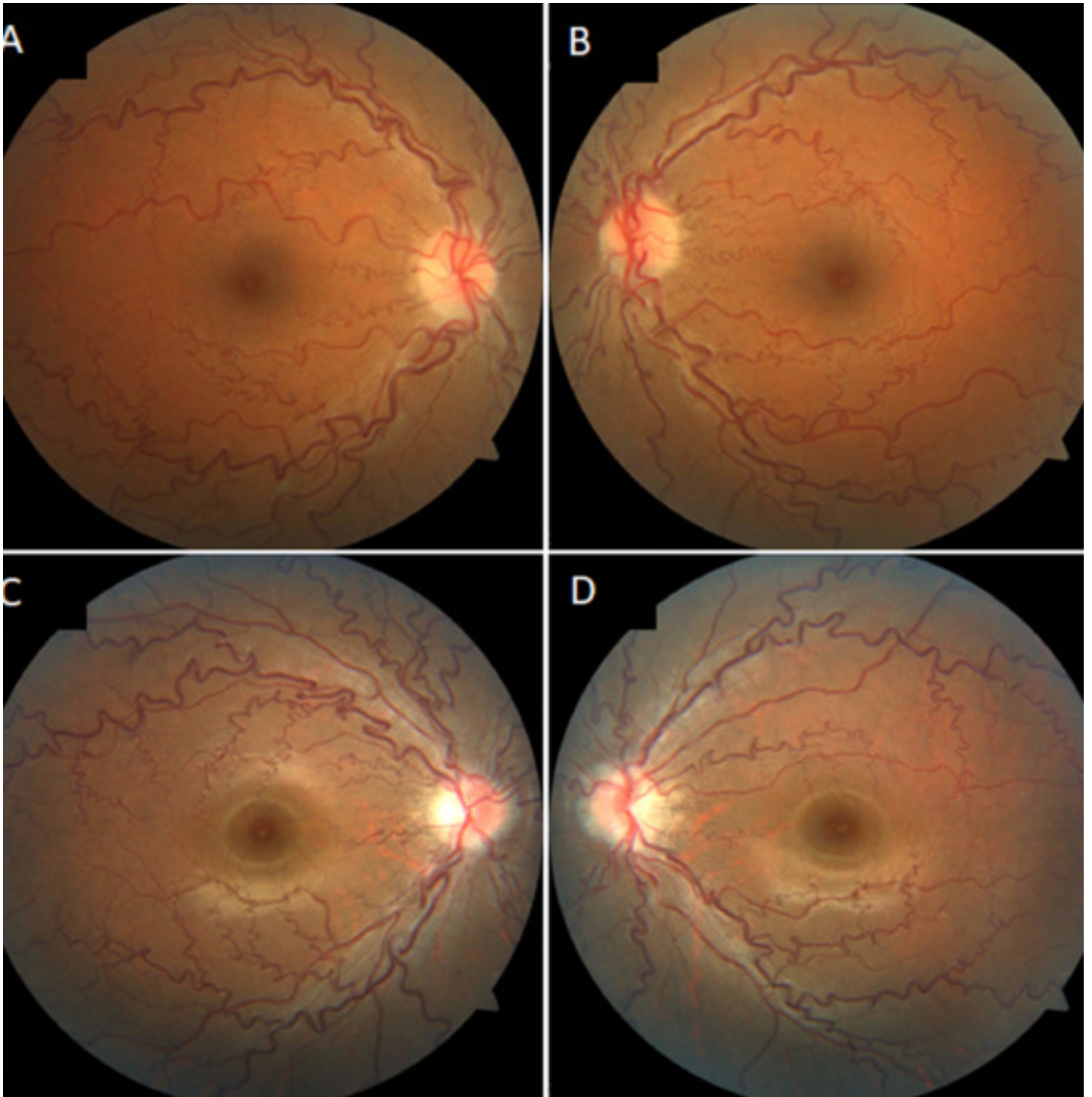


Fig. 1 Fundus photographs of both eyes of the mother (A, B) and daughter (C, D). Tortuosity was observed with marked lightning-like curvature of the retinal arteries and veins from the origin. In addition to arterial tortuosity, severe vein tortuosity was also observed and the degree of tortuosity increased as the blood vessels became smaller. The mother (A, B) had a higher degree of arterial tortuosity than the daughter (C, D). Both mother and daughter had good corrected visual acuity in both eyes, but the mother had $-3D$ and the daughter had $-9D$ myopia, with both eyes having mild optic disk hypoplasia. In addition, the daughter had a small disc in both eyes.

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