Angioid streaks in beta thalassaemia minor

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SUMMARY We report what we believe to be the first recorded case of angioid streaks in a patient with beta thalassaemia minor. The occurrence of angioid streaks in a patient with a relatively normal iron balance and only very mild haemolysis may be explained by the combination of pregnancy with associated multiple transfusions in a myopic patient where an inherent defect in Bruch’s membrane may exist.

Angioid streaks, representing breaks in Bruch’s membrane, with the typical ophthalmoscopic appearance of reddish brown bands radiating outwards from the optic disc, were first described in 1889 by Doyne. Subsequently they have been described in a number of conditions, the most notable being pseudoxanthoma elasticum, Paget’s disease of bone, and certain haemoglobinopathies, particularly sickle cell disease.

We report a patient with beta thalassaemia minor who was found to have angioid streaks in both fundi.

Case report

In July 1982 a 42-year-old woman of Italian extraction had beta thalassaemia minor diagnosed by a haematological unit, having presented with a long history of mild anaemia with more severe exacerbations needing multiple blood transfusions during each of three preceding pregnancies (the last one being in 1973). Apart from symptoms of mild anaemia she was otherwise asymptomatic, and general physical examination was normal. There was no family history of thalassaemia.

In February 1986 she presented with a three-month history of blurred vision in her left eye. Examination revealed a visual acuity of 6/60 in the right eye and 2/60 in the left eye, improving to 6/18 and 6/36 respectively with −3.50 dioptre sphere correction in each eye. Angioid streaks were noted in both fundi, radiating outwards from the optic discs and passing through both maculae (Figs. 1 and 2).

Laboratory investigations were as follows: Hb 11.5 g/dl, mean cell volume 61 μm³ reticulocyte count 3% (normal less than 2%). The following were normal: serum Fe, total iron binding capacity, serum folic acid, serum B₁₂, erythrocyte folic acid, haptoglobins, and thyroxine. Hb electrophoresis showed Hb A₁=94.7%, Hb A₂=5.3% (normal less than or equal to 2%). A blood film showed occasional microcytic hypochromic red blood cells in addition to rod, pear, and target cells; leucocytes and platelets were normal.

A skin biopsy showed no evidence of pseudoxanthoma elasticum, nor was there any evidence, clinical, biochemical, or radiological, of Paget’s disease of bone.

Over a four-year follow-up the haemoglobin remained fairly constant (between 10 to 11 g/dl) with only a very mild haemolysis (as shown by haematological indices) while the patient received no treatment.

Discussion

Angioid streaks have been described in several haemoglobinopathies, including homozygous sickle cell anaemia, sickle cell trait, sickle cell haemoglobin C disease, and sickle cell thalassaemia, but until recently their occurrence in the thalassaemias has not been described (Table 1). In 1979 angioid streaks were noted in a patient with haemoglobin H

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References


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Fig. 1 Fundus photograph of right optic disc showing angioid streaks.

Fig. 2 Fluorescein angiogram of left fundus demonstrating angioid streaks above optic disc.


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