Case Report

A Rare Case of Thalassemia and Angioid Streaks

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Abstract

Here we describe a rare case of thalassemia and angioid streaks. Our patient was a woman who had been referred to our center due to reduction in vision over the past few years. She had a history of thalassemia major and related therapeutic interventions. The right eye sight was - 2/10 and the left eye sight was - 1/10. In her fundus view diffuse lesions were observed in both eyes. The patient was diagnosed as a case of angioid streak.

Keywords:

Angioid Streaks

Thalassemia

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Introduction

Angioid streak was first described in 1889 by Doyne.' as a fracture in the Bruch's membrane, which often is seen as bilateral thin jagged lines in deep retinal layers [1,2].

The size, color and path of the lesions usually mimic vascular structures [3]. It mostly spreads from the optic nerve end towards the retinal edge but occasionally is observed in peripapillary region in a circular fashion [1,3]. The color of the lesion depends on the background color of the fundus and the degree of retinal pigment epithelium atrophy can vary from red to dark brown [3].

Diagnosis is usually easily achieved by ophthalmoscopy, but sometimes fluorescein angiography is required in suspected cases [4]. In fundus exam Peau d'orange (Leopard Skin) view, especially among patients with pseudoxanthoma elasticum is clearly identified [5].

Case Report

Our patient was a woman referred to our center due to reduction in vision over the past few years. She had a history of thalassemia major and related therapeutic interventions. The right eye sight was - 2/10 and the left eye sight was - 1/10. In her fundus view diffuse lesions were observed in both eyes (Figure 1). The patient was diagnosed as a case of Angioid Streak.

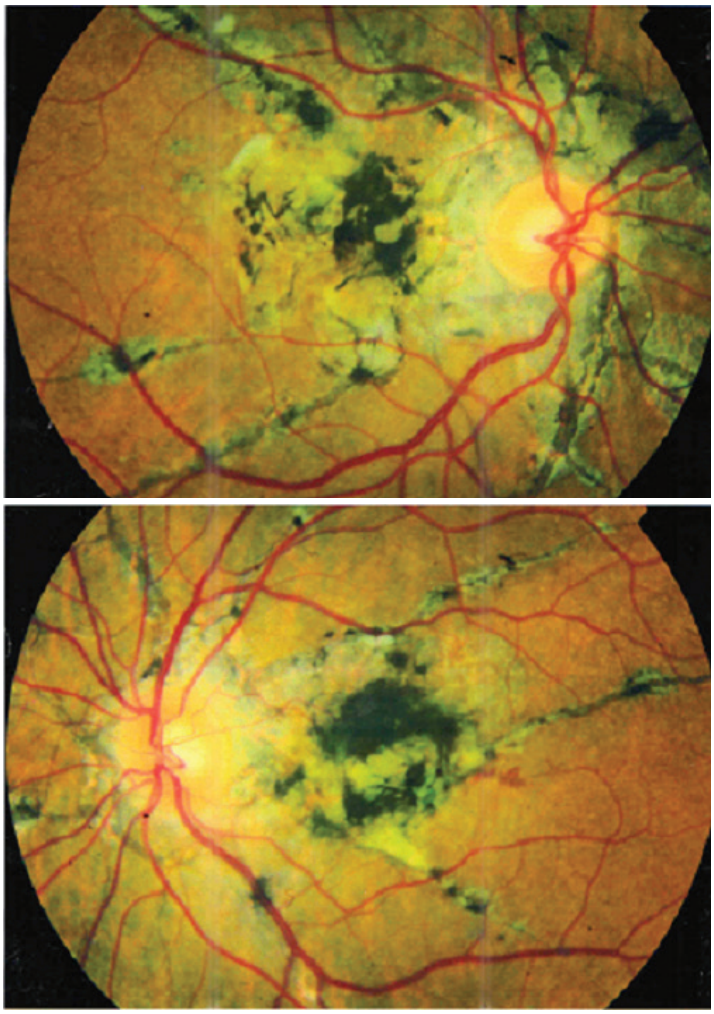

Figure 1: Diffuse lesions spreading from the optic nerve end towards the retinal edge in a patient with thalassemia major and angioid streak

Discussion

Angioid streaks have been described in pseudoxanthoma elasticum [6] and Paget's disease [7] as well as several hemoglobinopathies including homozygous sickle cell anaemia [8], sickle cell trait [9], sickle cell hemoglobin C disease [10], sickle cell thalassaemia [11], and thalassaemia [2,12, 13].

Beta thalassemia is a dominantly inherited condition in which the patient has an inability to form beta globin chains resulting in variable phenotypes ranging from severe anemia to clinically asymptomatic individuals [14]. It seems that the association between angioid streaks and hemoglobinopathies including thalassemia is of significance and not a chance phenomenon [12]. Here we described a case of thalassemia major and angioid streaks which despite its rarity should be considered by ophthalmologists in thalassemia patients with impaired visual acuity.

Conclusion

Despite its rarity angioid streaks should be considered in patients with thalassemia and impared visal acuity.

References

1. Doyne RW. Choroidal and retinal changes-the results of blows to the eyes. Trans Ophthalmol Soc UK 1889; 9: 128-31.

2. Kinsella FP, Mooney DJ. Angioid streaks in beta thalassaemia minor. Br J Ophthalmol. 1988;72(4):303-4.

3. Georgalas I, Papaconstantinou D, Koutsandrea C, Kalantzis G, Karagiannis D, Georgopoulos G, et al. Angioid streaks, clinical course, complications, and current therapeutic management. Ther Clin Risk Manag. 2009;5(1):81-9.

4. González-Blanco MJ, Blanco-Rivera C, Campos-García S. Treatment of angioid streaks with phothodynamic therapy. Arch Soc Esp Oftalmol. 2007;82(11):719-22. (Article in Spanish)

5. Spaide RF. Peau d'orange and angioid streaks: manifestations of Bruch membrane pathology. Retina. 2015;35(3):392-7.

6. Delyfer MN, Rougier MB, Korobelnik JF. Optic disc drusen and angioid streaks in pseudoxanthoma elasticum. J Fr Ophtalmol. 2012;35(6):467-8. (Article in French)

7. Martiano D, Caillaux V, Cohen SY, Querques G, Cochener B, Souied EH. Angioid streaks complicated by choroidal neovascularization in Paget's disease. J Fr Ophtalmol. 2016;39(9):e239-e240.

8. Hamilton AM, Pope FM, Condon PI, Slavin G, Sowter C, Ford S, et al. Angioid streaks in Jamaican patients with homozygous sickle cell disease. Br J Ophthalmol. 1981;65(5):341-7.

9. Ketner S, Moradi IE, Rosenbaum PS. Angioid streaks in association with sickle thalassemia trait. 10. JAMA Ophthalmol. 2015;133(1):e141770.

10. Condon PI, Serjeant GR. Ocular findings in hemoglobin SC disease in Jamaica. Am J Ophthalmol. 1972;74(5):921-31.

11. Aessopos A, Voskaridou E, Kavouklis E, Vassilopoulos G, Rombos Y, Gavriel L, et al. Angioid streaks in sickle-thalassemia. Am J Ophthalmol. 1994;117(5):589-92.

12. Gibson JM, Chaudhuri PR, Rosenthal AR. Angioid streaks in a case of beta thalassaemia major. Br J Ophthalmol. 1983;67(1):29-31.

13. Vistamehr S, Larrison WI, Adelman RA. Angioid streaks in thalassemia intermedia: warning for thromboembolic events. Retin Cases Brief Rep. 2009 Spring;3(2):190-2.

14. Galanello R, Origa R. Beta-thalassemia. Orphanet Journal of Rare Diseases. 2010;5:11.

Footnotes and Financial Disclosures

Conflict of Interest:

The authors declare no conflict of interest with the subject matter of the present manuscript.