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Blue Sclera and Iron Deficiency Anaemia- A Case Report

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KEYWORDS

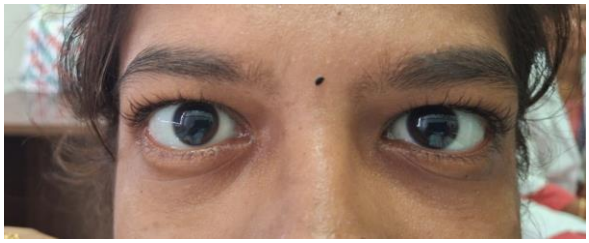
Blue Sclera, Iron Deficiency Anaemia

ABSTRACT:

Blue sclera is associated with congenital and hereditary diseases like osteogenesis imperfecta, Marfans syndrome, Ehlers Danlos syndrome, Van der heave syndrome and incontinentia pigmenti.[1] It has also been reported in autoimmne conditions like rheumatoid arthritis, polyarthritis, relapsing polychondrtis and granulomatosis.[2] It is due to thinning of the collagen fibres and increased transparency of the underlying uvea seen in conditions having defective type 1 collagen formation.

CASE REPORT

A 20 year old girl presented to the ophthalmology OPD with complaints of bluish discolouration of the sclera of 2 months duration. She also gave history of generalized weakness and fatigue for the past 6 months and menorrhagia of 1 year duration. Best corrected visual visual acuity was 6/6 in both eyes, anterior segment examination showed conjunctival pallor and bluish discolouration of the sclera,fundus examination was normal. Physical examination was done which did not reveal any musculoskeletal abnormalities. A complete blood count showed Hb 8 mg/dl, PCV 26.5% and serum ferritin 8ng/ml. Peripheral smear showed microcytic hypochromic anaemia. A diagnosis of iron deficiency anaemia was made and the patient was started on iron supplements with improvement in symptoms and scleral colour over 3months.



DISCUSSION

Blue sclera and iron deficiency anaemia was first reported by Sir William Osler in 1908.[3] Barton and Friedman reported the association of iron deficiency anaemia and blue sclera in infants and young children. Kotsev L *et al.* studied adult patients with anemia who had proven iron deficiency and found that the presence of blue sclera has a sensitivity of 89%.[4,5,6] Pathogenesis is thought to be thinning of the collagen fibers of the sclera due to iron deficiency, which allows the bluish color of the underlying uvea.[7]

The presence of blue sclera should alert the physician of the possibility of severe iron deficiency anaemia. It is seen more commonly in iron deficiency anaemia than other types of anaemias, and the presence of blue sclerae was unaffected by age, sex, or colour of iris [4.] . Kalra et al in their study showed that the specificity of blue sclerae in iron-deficiency anaemia was 0.94 with a sensitivity of 0.87. By comparison, mucosal pallor was noted in only 30% of patients with iron-deficiency anaemia, with a specificity of 0.96 and a sensitivity of only 0.20 [4.5]It is a good indicator of the disease and should become a part of regular clinical examination.

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