Case Report

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Recurrent uveitis in a patient with CREST syndrome: a case report

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Introduction: Systemic sclerosis is a connective tissue condition presented with clinical manifestations, including ocular involvement in a small percentage. A few cases of uveitis were described in the literature, especially in CREST syndrome.
Case presentation: The authors reported a case of a 48-year-old male with a blurred vision in his left eye that diagnosed with recurrent uveitis in the setting of CREST syndrome, treated with prednisolone, methotrexate, and golimumab, with improvement.
Discussion: Ocular manifestations of systemic sclerosis include palpebral alterations, keratoconjunctivitis, sicca syndrome, cataracts, pinguecula, and blepharitis. To our knowledge, this is the fifth case of uveitis in a setting of CREST syndrome in the literature, and the first one in sex involvement, as the previous cases were females, and in its treatment by golimumab, an anti-tumor necrosis factor inhibitor.
Conclusion: Although this association is low, we believe that it should be taken into consideration when treating these situations to obtain better treatment results. Collaboration between rheumatologists and ophthalmologists is necessary in deciding on treatment.

Keywords: CREST syndrome, ocular involvement, systemic sclerosis, uveitis

Introduction

Systemic sclerosis (SSc) is a connective tissue disease characterized by cutaneous thickness and vasculopathy[1]. It is classified into two types: limited scleroderma to the skin and SSc with cutaneous and internal-organ manifestations and the less common SSc sine scleroderma with internal-organ manifestations but no skin involvement[2].

Limited scleroderma or CREST syndrome should meet at least three of the following features: calcinosis, Raynaud's phenomenon, esophageal dysmotility, sclerodactyly, and telangiectasia[3]. Ocular involvement in CREST is rare[4]. Our case is the fifth one that described uveitis with CREST syndrome in the literature.

Our case report herein adheres to the CARE criteria 2013[5].

Case presentation

A 48-year-old male attended ophthalmology consultations at our hospital in April 2022 for recurrent episodes of acute pain, redness, photophobia, excessive tearing, and decreased vision and blurred vision of the left eye. He was diagnosed with CREST syndrome (Fig. 1) and he is under treatment with verapamil, pentaprazole, and cinitapride.

No positive family history, previous comorbidities, medical history, drug allergies, or toxic habits.

On examination, he had pitting of the fingers of both hands (Fig. 1).

HIGHLIGHTS

- Patients with uveitis in the setting of CREST syndrome may be dismissed as it is very rare.
- We believe that it should be taken into consideration when treating these situations to obtain better treatment results.
- Collaboration between rheumatologists and ophthalmologists is very important in deciding on treatment.

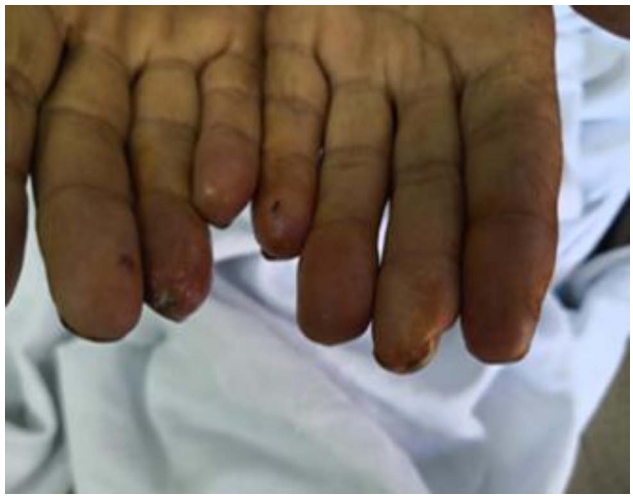

Figure 1. Pitting of the fingers of the hands.

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Ocular examination showed white blood cells in the anterior chamber, vitreous, redness closely surrounding the cornea (ciliary flush), and iridolenticular synechia on slit-lamp examination, and macular edema on fundoscopy with visual acuity (VA) 0.6 in the left red eye (Fig. 2).

According to the previous finding, he was diagnosed with recurrent anterior uveitis with secondary macular edema[6].

Laboratory studies were normal. Anti-nuclear antibody titer was positive at 1/640, centromere pattern. Chest X-rays were normal. Lung function was normal. Echocardiography was also normal.

There was no history of trauma or eye infection, nor inflammation elsewhere in the body due to immune diseases such as ankylosing spondylitis, inflammatory bowel disease, and sarcoidosis, so all other causes of uveitis were excluded.

He was treated with 30 mg/PO (per os – by mouth)/day prednisolone, topical dexamethasone eye drops, and triamcinolone acetonide subtenon injection, with improvement and flare-ups coinciding with tapering of the prednisolone. Therefore, after 6 months, 10 mg/PO/week of methotrexate was initiated. After 3 months, it was necessary to increase the dose of methotrexate to 25 mg/SC (subcutaneously)/week, without complete remission in ocular examination, as there still were cells + 1 and decreased vision for that, he started 50 mg/SC/month golimumab, with significant improvement and stabilization on ocular examination after the first dose until now, the following next 4 months (VA 0.9 in the right eye and 0.7 in the left eye, and no cells were found on slit-lamp examination).

We had discussed the treatment we listed above with the patient, and he agreed to start with it after we had explained the expected side effects.

Discussion

Infections, immune-mediated diseases, systemic diseases, and idiopathic are their principal etiologies[7]. Seronegative spondyloarthropathies, sarcoidosis, Bechet's syndrome, juvenile idiopathic arthritis, and inflammatory bowel disease are the frequent diseases, which may present with uveitis as one of their clinical presentations[8,]but uveitis is uncommon in SSc; it is a diagnostic challenge for the ophthalmologist and rheumatologists so that they may misdiagnose it.

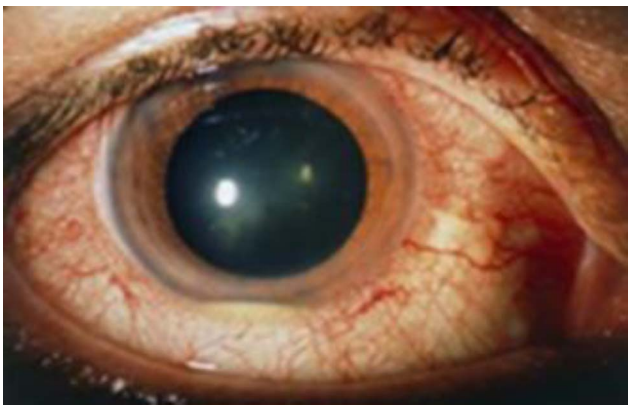

Figure 2. Ocular findings.

Ocular manifestations of SSc include palpebral alterations, keratoconjunctivitis, sicca syndrome, cataracts, pinguecula, and blepharitis[9]. Pinguecula is an abnormal growth of tissue on the conjunctiva, the clear membrane that covers the white of the eye[7–9].

Most ocular symptoms of CREST are limited to the anterior segment and include keratoconjunctivitis sicca and eyelid telangiectasias. Posterior pole findings typically mimic those of hypertensive retinopathy and include vascular tortuosity, cotton wool spots, and mild retinal microvascular abnormalities[10].

Only four cases of uveitis in CREST were reported in the literature[1,11,12]. The first case was described in 2000, a 73-year-old woman with unilateral granulomatous anterior uveitis in a set of CREST syndrome, treated successfully with topical steroids and mydriatics. Then Yang *et al*. reported two cases of 77-year-old and 51-year-old women with CREST syndrome with ocular inflammatory disease. Patient 1 presented with right eye panuveitis. Patient 2 presented with bilateral retinal vasculitis and a left branch retinal artery occlusion. Both patients underwent treatment with prednisone and mycophenolate motel, and finally, Fuente Cosío *et al*. described a case of a 48-year male presented with panuveitis, and macular edema with VA, treated with cortisone, tropical dexamethasone, and methotrexate, and later cyclophosphamide. Our patient is a male, although SSc is more common in women than men[13]. There were no adverse events due to golimumab treatment.

To our knowledge, this is the fifth case of uveitis in a setting of CREST syndrome in the literature and the first one in a setting of sex involvement, as the previous cases were females, and in its treatment by golimumab, an anti-tumor necrosis factor inhibitor.

Conclusion

Although this association is low, we believe that it should be taken into consideration when treating these situations in order to obtain better treatment results. Collaboration between rheumatologists and ophthalmologists is very important in making the decision of treatment.

Ethical approval

Ethical approval by Ethical Committee of Faculty of Medicine, Damascus University, Syrian Arab Republic, IRB: DH22875, 2023.

Consent

Written informed consent was obtained from the patient for the publication and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Author contribution

N.K.: manuscript writing and editing and approval of the final manuscript; M.K.: clinical follow-up, literature review, mentor,

and approval of the final manuscript; Y.H., R.T., and A.H.: manuscript writing and approval of the final manuscript.

Conflicts of interest disclosure

The authors have no conflicts of interest to declare.

Research registration unique identifying number (UIN)

1. Name of the registry: Researchregistry.com
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Guarantor

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Data availability statement

The case data is unavailable.

Provenance and peer review

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References

[1] Fuente Cosío S, Arca Barca B, Martínez García P, *et al*. Chronic anterior uveitis in a patient with CREST syndrome. Reumatol Clin (Engl Ed) 2020;16:497–8.
[2] Denton CP, Khanna D. Systemic sclerosis. Lancet 2017;390:1685–99.
[3] Bobeica C, Niculet E, Craescu M, *et al*. CREST syndrome in systemic sclerosis patients – is dystrophic calcinosis a key element to a positive diagnosis? J Inflamm Res 2022;15:3387–94.
[4] Santos PS, Oliveira L, Moraes MF. Granulomatous uveitis, CREST syndrome, and primary biliary cirrhosis. Br J Ophthalmol 2000;84:548–9.
[5] Gagnier JJ, Kienle G, Altman DG, *et al*. The CARE guidelines: consensus-based clinical case reporting guideline development. Glob Adv Health Med 2013;2:38–43.
[6] Jabs DA, Nussenblatt RB, Rosenbaum JT. Standardization of Uveitis Nomenclature (SUN) Working Group. Standardization of uveitis nomenclature for reporting clinical data. Results of the first international workshop. Am J Ophthalmol 2005;140:509–16.
[7] Jun A, Yuhan K. The role of primary care providers for uveitis. J Nurse Pract 2021;17:1194–8.
[8] Hysa E, Cutolo CA, Gotelli E, *et al*. Immunopathophysiology and clinical impact of uveitis in inflammatory rheumatic diseases: an update. Eur J Clin Invest 2021;51:e13572.
[9] Waszczykowska A, Goś R, Waszczykowska E, *et al*. Clinical research. Prevalence of ocular manifestations in systemic sclerosis patients. Arch Med Sci 2013;9:1107–13.
[10] Rahman EZ, Beck KD, Waldman CW, *et al*. Unusual presentation of CREST retinal vasculitis. Am J Ophthalmol Case Rep 2021;23:101172.
[11] Akman A, Akova YA, Yücel E, *et al*. Granulomatous anterior uveitis in a patient with CREST syndrome. Ocul Immunol Inflamm 2000;8:201–3.
[12] Yang S, Kopplin LJ, Rosenbaum JT. Retinal vasculitis associated with CREST syndrome. Am J Ophthalmol Case Rep 2018;10:185–8.
[13] Hughes M, Pauling JD, Armstrong-James L, *et al*. Gender-related differences in systemic sclerosis. Autoimmun Rev 2020;19:102494.