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DRY EYE SYNDROME---IS IT RHEUMATOID ARTHRITIS OR SJOGREN SYNDROME?

Ophthalmology

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ABSTRACT

Overview: Dry eye syndrome is a accumulative set of conditions which have a similar presentation and are commonly encountered on a routine basis in ophthalmic and general practice. The present case report depicts an incident of ocular symptoms leading to diagnosis of auto-immune disorder in a previously undiagnosed individual. Female came to Ophthalmology OPD with ocular complaints of redness, itching, blurring of vision. Detailed history and examination revealed signs and symptoms similar to RA or Sjogrens syndrome, test like Schirmer's test, Tear Film Break up Time for the diagnosis of keratoconjunctivitis sicca.Treatment includes lubricating agent, artificial tear, and mild steroid.

KEYWORDS

Rheumatoid arthritis, keratoconjunctivitis sicca, Schirmer's test, tear film break up time.

INTRODUCTION-

Rheumatoid arthritis (RA) is the most common systemic inflammatory disease associated with a number of extra-articular organ manifestations. Ocular manifestations involved with RA are keratoconjunctivitis sicca (KCS), episcleritis, scleritis, corneal changes, and retinal vasculitus.KCS is the most commonestocular manifestation of RA and is the initial manifestation of *ocular disease* [1].Sjogren's syndrome is an autoimmune disorder characterized by lymphatic inflammation and destruction of lacrimal and salivary glands and other exocrine organs. The classical clinical triad consists of dry eyes, dry mouth and parotid gland enlargement. The reported incidence and prevalence of DED in patients with RA ranges from 18% to 90% with moderate to severe symptoms seen in up to 50% of patients [2]. The pathophysiology of RA is depictive of chronic inflammatory changes leading to proliferation of the synovial with cartilage damage and bony erosions. *Studies suggest that* the oxidative stress on the ocular surface is the underlying cause for the damage of the lacrimal tissue and also the decline in tear production in patients with inflammatory and autoimmune conditions such RA.

CASE REPORT-

A 53 years old female came to ophthalmology out-patient dept. with chief complaints of congestion in both eyesintermittently since 2 years with associated blurring of vision in affected eyesover a period of 18 months. Additional history taking revealed intermittent itching in the affected eyes since past 1 year.

Patient had undergone phaco-emulsification cataract surgery in both eyes 2 years back with hard lens in situ. General Medical examination revealed a complaint of joint pain in large and small joints with swan neck deformity of hands. Patient had no other complaints or co-morbidities.

EXAMINATION-

Opthalmological examination was done and visual acuity for both eyes were determined using Snellen's chart, which revealed right eye acuity as 6/60 and left eye acuity as 6/24. Furtherocular examination was done in patient with torch light showing normal pupillary reaction in both eyes.Slit lamp examination revealed historically accurate pseudophakia bilaterallywith punctuate epithelial erosion, visible on florescentstaining over cornea in right eye. Superficial vascularization was prominently visible along the entire periphery of limbal region in right eye. Conjunctival congestion was seen in both eyes(fig.1), with a larger involvement in the right eye. Schirmer's test revealed a value of less than 5 mm in both eyes(fig-2), while tear film break up time using fluorescein stain was recorded as being less than 8 seconds. Syringing revealed a patent lacrimal duct. No deficiency in extra-ocular movements was observed. Dilatation was done using 1% tropicamide eye drops, and subsequent ophthalmoscopy revealed no abnormality in retinal structures. Patient was counselled regarding need for further investigations in dept of general medicine.

Figure-1

Figure-2

Figure-3

Consultation with physician lead to investigative modalities which revealed that the patient was having a positive titer of Anti-CCP antibodies, as well as positive RA factor. Serum Uric acid was elevated with a value of 5.6 mg/dl, while ESR was 85 mm/hr. The radiology revealed a swan neck deformity over both hands(fig-3).The differential diagnosis of Sjogren syndrome was ruled out by absence of any parotid pathologies and a negative Anti SS-A and Anti SS-B test. Based on clinical evidence and investigations, the diagnosis was Keratoconjunctivitis Sicca secondary to Rheumatoid Arthritis.

MANAGEMENT- (Use Generic Names in all drugs)

Ophthalmological management of keratoconjunctivitis sicca was administration of lubricating agent-HPMC (Hydroxy Propyl Methyl Cellulose) HS, Artificial tear-carboxymethylcellulose e/d 3 times a day, Immune-modulator-cyclosporine 1.8% 3 times a day, Mild steroid-Florate-T e/d 3 times/dayTreatment for rheumatoid arthritis included oral tab. prednisolone10mg bd, tab. Naproxen 250mg bd, tab. Methotrexate 7.5gm once a week.

DISCUSSION-

Ocular symptoms can be early presentation for RA, mainly when RA patients present with redness, itching, milddiscomfort, visualchanges. Once autoimmune nature of ocular disease is suspected, a multidisciplary approach will prove to be the best option to manage RA-associated ocular pathology.

Studies have demonstrated that majority of patients having rheumatoid arthritis have ocular presentations similar to the case seen in our institute[3] The study by Aluru et al, depicted a prevalence of 86 % dry

eye manifestations in RA cases, with a grade ranging from moderate to severe in intensity and discomfort[4].

The evidence in literature and as seen in our institute suggests that a mandatory protocol be set up to provide an education as well as an evaluation to all cases of auto-immune disorders as regards to ocular manifestations.

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