



AN OBSERVATIONAL STUDY OF OCULAR MANIFESTATIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS.

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ABSTRACT

Background: The incidence of ocular manifestations in Systemic Lupus Erythematosus (SLE) are fairly common. They can manifest before the onset of systemic signs and symptoms. Thus, aiding in early diagnosis of the disease. SLE can affect any structure of the eye and its adnexa. Assessment of SLE patients for ophthalmic manifestations is of utmost importance in order to initiate appropriate treatment and help prevent significant visual morbidity. **Aims & Objectives:** The study was conducted with the aim of determining the prevalence and types of ocular manifestations in SLE. **Materials and methods:** Patients attending the Medicine Out Patient Department at R.G. Kar Medical College, Kolkata having diagnosed with SLE were selected for the study. They underwent complete ophthalmological examination. A prospective observational study was carried out in 88 patients. **Result:** Prevalence of ocular manifestations was found to be 21.5%. Age group of the study population ranged from 10-40 years. Mean duration of SLE was 3 years. Various ocular manifestations found in our study were 8 cases of Keratoconjunctivitis Sicca (9%), 1 case of Conjunctivitis (1.13%), 3 cases of Episcleritis (3.4%), 1 case of Uveitis (1.13%), 2 cases of Superficial Punctate keratitis (2.27%), 2 cases of Papilloedema (2.27%), 2 cases of Purtscher-like Retinopathy (2.27%). **Conclusion:** Ocular manifestations in SLE may be associated with serious vision threatening complications and other minor ocular conditions which can be prevented and treated at the earliest to reduce ocular morbidity if prompt ophthalmic assessment is carried out.

KEYWORDS :**INTRODUCTION**

Systemic Lupus Erythematosus (SLE) is a chronic, inflammatory disease with multisystem involvement characterized by presence of ANA. The prevalence of SLE is 20-150 cases per 100,000 population^{1,2}, female to male ratio is 9:1.³

Various genetic, epigenetic, immunoregulatory, environmental and infectious factors contribute to the susceptibility, onset, progression and prognosis of SLE. R. Bergmeister in 1929, first reported Lupus in the eye and Semon and Wolff, in 1933, described the histopathological characteristics of choroiditis and subretinal exudation in SLE patients. Incidence of ocular manifestations has been reported to be 25-33% in SLE.⁴

Ocular manifestations in SLE include abnormalities of the eye and its adnexa. Some common findings include: Keratoconjunctivitis Sicca, Episcleritis, Scleritis, Iridocyclitis, Retinal vasculitis, Choroidopathy and Optic neuropathy. Ophthalmic morbidity results due to immune complex deposition, other antibody mechanisms, vasculitis and thrombosis.⁵

It can also result from the drugs used for treatment of SLE. Infliximab, Corticosteroids, Chloroquine and Hydroxychloroquine causes ocular morbidity. Ocular manifestation could be the earliest sign of SLE facilitating early diagnosis and it also serves as an indicator for systemic disease activity and prognosis.⁶ Symptoms vary from patient to patient. Keratoconjunctivitis sicca is the most common manifestation while retinal and choroidal involvement are most associated with vision loss.⁷

MATERIALS AND METHODS

This is a prospective observational study performed over a period of about 1 year from April 2021 to March 2022. 88 patients diagnosed with SLE in the Medicine outpatient department of R.G Kar Medical College, Kolkata were included in the study. An informed consent was taken from all the patients. Ethical clearance was obtained from the institute's Ethics Committee.

Exclusion Criteria

Patients with cataract (which precludes the view of the retina). Patient with any ocular or systemic disease with posterior fundus lesions which can have a confounding effect on retinal changes were also excluded from the study.

Procedure

A thorough history was taken. All patients underwent slit lamp examination of the anterior segment and findings were noted. The visual acuity was noted using Snellen's chart. Following which the pupils were dilated using Tropicamide 0.8% + Phenylephrine Hydrochloride 5% eye drops. The fundus was then examined using direct ophthalmoscope, slit lamp biomicroscopy with 90 Diopter lens and indirect ophthalmoscope with 20Diopter lens and findings were noted.

RESULTS AND ANALYSIS

Between April 2021 and March 2022, a total of 88 patients with SLE were examined for ocular manifestations. The prevalence and type of ocular manifestations were analysed.

On data analysis of our study it was found that the prevalence of ocular manifestations in SLE was 21.5% and most common ocular manifestation was Keratoconjunctivitis sicca.

- Mean age of study population is 26.11 (10-40yrs)
- All 88 patients are females.
- Mean duration of SLE was 3 yrs in our study population.
- Various ocular manifestations found in our study were,
- Keratoconjunctivitis sicca 9%
- Episcleritis in 3.4%
- Purtscher-like Retinopathy in 2.27%
- Superficial punctate keratitis in 2.27%
- Papilloedema in 2.27%
- Anterior uveitis in 1.13%
- Conjunctivitis 1.13%
- No findings were observed in 78.4%

DISCUSSION

Female preponderance is seen in our study. A study carried out by Kanda N et al in 1996 reported that estrogen enhances SLE and testosterone suppresses it.

In our study 2 patients presented with Purtscher-like retinopathy with Central nervous system involvement. Similarly, Wu C et al in 2015 reported that Purtscher-like retinopathy was associated with central nervous system lupus and a highly active systemic disease with poor visual prognosis.

2 patients were found to have papilledema in our study. John J. Chen et

al in their study found improvement of papilledema in SLE following immunosuppressive treatment indicating that raised intracranial tension was due to the underlying SLE rather than idiopathic intracranial hypertension.

A retrospective, observational study done by Rosanna Dammacco et al in 2018 concluded that among 98 patients with SLE ocular involvement was detected in 29(28%). More than a single manifestation occurring in 20 out of the 29.

CONCLUSION

- Our study reports the ocular manifestations of SLE in a tertiary care hospital of Eastern India. Based on our study and other epidemiological studies:
- Ocular manifestations could be the first presenting sign of SLE leading to early diagnosis of the disease.
- Ocular manifestations may be associated with serious vision threatening complications which are preventable and treatable.
- Ophthalmic workup in SLE can be made in tailored to a systematic approach of thorough history taking, detailed clinical examination to arrive at a diagnosis.
- Thus limited and valuable resources can be properly utilized in reducing the ocular morbidity from SLE.

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