# Systemic Manifestations of Iridocyclitis

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## ABSTRACT

*Seven hundred sixty one patients of iridocyclitis confirmed after slit-lamp examination were inducted into the study Selected patients were thoroughly examined and investigated for the presence of any underlying systemic disease One hundred fourteen (14.98%) patients were found to have some underlying systemic disease. Rheumatoid arthritis was present in 32(4.20%), ulcerative colitis in 17(2.23%) and tuberculosis in 12(1.58%) patients Ankylosing spondylitis, interstitial nephritis and juvenile chronic arthritis were each seen in 10(1.31%) patients.*

## INTRODUCTION

Eye diseases are very common in our area. Often overlooked is the fact that many ocular problems have underlying systemic diseases, the gravity of which is not given due significance by the patient. This results in inadvertent delay in initiation of treatment of the underlying pathology and also increases the chances of complications. Iridocyclitis is one such ophthalmic presentation of many systemic diseases[1-2]. The present study was conducted to see the frequency of the systemic diseases in patients presenting with iridocyclitis in our setting.

### Design

Prospective, cross-sectional and observational study

### Settings

OPDs of Ophthalmology and Medicine, Chandka Medical College, Larkana.

## PATIENTS AND METHODS

All patients presenting at the Department of Ophthalmology during the period of February '97 to January '98 were screened for the presence of iridocyclitis. The diagnosis of iridocyclitis was confirmed with slit-lamp examination by the following criteria[3]:

1. Flare in the anterior chamber
2. Cells in the anterior chamber
3. Evidence of iris-lens adhesion
4. Keratic precipitates
5 Ciliary injection

Patients with iridocyclitis were selected for further workup. Selected patients underwent complete physical examination for detection of systemic involvement. Findings were recorded in a proforma and the following investigations were carried out:

1. Complete Blood Count
2. ESR
3. Urine (Routine)
4. Blood urea
5. Creatinine
6. Blood Sugar (Fasting & 2 hour PP)
7 Chest X-ray, PA View

Complete Blood Counts were done on Sysmex K-4500 automated cell counter, while the biochemistry was done on Photometer 5010 using Boehringer Mannheim Diagnostic Reagents.

The following investigations were carried out only in selected cases where clinical examination indicated them:

1. Rheumatoid Factor
2. Uric Acid
3. X-ray Hands with wrist joints
4 ANA
5 Anti dsDNA
6 VDRL
7. Mantoux Test
8. Stool(Routine)
9. Stool Culture

10. Sigmoidoscopy/colonoscopy
11. Barium Enema
12. Renal Biopsy
13. RPR/VDRL

Rheumatoid factor, ANA, Anti-dsDNA were done by EIA method. Mantoux test was done by injecting 5 tuberculin units of polysorbate-stabilized PPD intradermally into the volar surface of the forearm. Reactions were read at 48 to 72 h as the transverse diameter in millimeters of induration; a 10-mm cut-off was used to define positive reactions[4]. Renal biopsy was done by Trucut disposable needle from the renal angle

### Diagnostic Criteria

Rheumatoid Arthritis: Diagnosis was made according to the recommendations of the American Rheumatism Association revised criteria of 1987 that four of the seven criteria be present for diagnosis[5]:

1. Morning stiffness
2. Arthritis of three or more joints
3. Arthritis of hand joints
4. Systemic arthritis
5. Rheumatoid nodules
6. Serum rheumatoid factor
7. Radiographic changes

**Juvenile Chronic Arthritis**: Diagnostic criteria were the same as those for rheumatoid arthritis with age less than 16 years.

**Psoriatic Arthritis**: Was diagnosed on the basis of typical psoriatic skin lesions present along with the evidence of arthritis[6].

**Ulcerative colitis and Crohn's disease**: The diagnosis of inflammatory bowel disease (ulcerative colitis and Crohn's disease) was based on the typical findings on barium studies that were confirmed by sigmoidoscopy/colonoscopy as indicated[7-8].

**Interstitial Nephritis**: Was diagnosed on renal biopsy showing infiltration of the tubulointerstitium by eosinophils, macrophages, and/or lymphocytes and by interstitial edema.

**Ankylosing Spondylitis**: Was diagnosed by these criteria[9]: the presence of radiographic sacroilitis plus any one of the following three criteria:

1. History of inflammatory back pain.
2. Limitation of motion of the lumbar spine in both the sagittal and the frontal planes.
3. Limited chest expansion, relative to standard values for age and sex.

**Reiter's Syndrome**: Was diagnosed if the triad of conjunctivitis, urethritis and arthritis was present[9-10].

**Behcet's Syndrome**: Was diagnosed on the basis of internationally agreed diagnostic criteria[11] that include recurrent oral ulcerations with any two of the following criteria:

1. Recurrent genital ulcerations.
2. Eye lesions.
3. Skin lesions.
4. Pethergy test.

**Gout**: Was diagnosed by typical clinical features of acute monoarthritis with demonstration of intracellular monosodium urate crystals in synovial fluid, polymorphonuclear leukocytes or in tophaceous aggregates.

**SLE**: Was diagnosed as per the criteria published by the American Rheumatism Association[12].

**Tuberculosis**: Diagnosis was made by typical clinical findings of constitutional complaints, respiratory symptoms, erythema nodosum, blurred vision, and bilateral hilar adenopathy along with negative Mantoux test and lymph node biopsy showing noncaseating granulomatous infection[13].

**Syphilis**: Was diagnosed on history, clinical examination and RPR and VDRL tests[14-15].

## RESULTS

During the period specified 9432 patients attended the OPD for various reasons, out of which 761(8.07%) patients were found to have iridocyclitis and were inducted into the study for assessment of systemic involvement and were investigated. There were 455(59.79%) males and 306(40.21%) females. Mean age $\pm$SD in males was 31.2$\pm$9.3 years and in females 28.3$\pm$8.1 years. Out of these 761 patients of iridocyclitis, 114 patients had some systemic disease present. The sex breakup of these 114 patients showed 60 males and 54 females. The diagnostic breakup of these patients is given in Table-1. Rheumatoid Arthritis (RA) was the most common systemic disease found in 4.2% (32/761) of patients with iridocyclitis. The mean ESR in the patients of RA was

Table 1: Frequency of Systemic Diseases in Iridocyclitis.

| Disease | Mean Age | No. | % | Male | Female |
|---|---|---|---|---|---|
| Rheumatoid Arthritis | 45.1 | 32 | 4.20% | 3 | 29 |
| Ulcerative Colitis | 28.4 | 17 | 2.23% | 14 | 3 |
| Tuberculosis | 30.1 | 12 | 1.58% | 7 | 5 |
| Ankylosing Spondylitis | 32.6 | 10 | 1.31% | 7 | 3 |
| Interstitial Nephritis | 29.8 | 10 | 1.31% | 4 | 6 |
| Juvenile Chronic Arthritis | 8.3 | 10 | 1.31% | 8 | 2 |
| Gout | 39.4 | 9 | 1.18% | 6 | 3 |
| Behcet's Syndrome | 27.8 | 3 | 0.39% | 3 | 0 |
| Crohn's Disease | 33.1 | 3 | 0.39% | 3 | 0 |
| Psoriatic Arthritis | 36.7 | 2 | 0.26% | 1 | 1 |
| Reiter's Syndrome | 28.1 | 2 | 0.26% | 2 | 0 |
| SLE | 26.8 | 2 | 0.26% | 0 | 2 |
| Sarcoidosis | 33.7 | 1 | 0.13% | 1 | 0 |
| Syphilis | 42.1 | 1 | 0.13% | 1 | 0 |
| **Total** | | **114** | **14.98%** | **60** | **54** |

88.3±2.1mm FHR. Rheumatoid Factor was positive in 29 patients and ANA was positive in 12 patients. Radiological evidence of different joint involvement was seen as under: Interphalyngeal joints (88%), wrist joint (79%), elbow (36%), Knee (19%), hip (12%). Ulcerative colitis and Crohn's disease were seen in 2.23% and 0.39%, respectively. The mean ESR in ulcerative colitis was 34mm FHR and that in Crohn's disease was 56mm FHR. Hepatomegaly was seen in 19% of patients of ulcerative colitis and splenomegaly was seen in 23%. Tuberculosis was seen in 1.58% of patients; of them 9 had pulmonary tuberculosis, 2 had tuberculous lymph nodes, while one had bone tuberculosis. Ankylosing spondylosis, interstitial nephritis and juvenile chronic arthritis each had a frequency of 1.31% and gout was seen in 1.18% of cases of iridocyclitis.

## DISCUSSION

The present series highlights the significance of systemic examination in cases of iridocyclitis. We found underlying systemic diseases in 14.98% of cases presenting with iridocyclitis. All the diseases found were of clinical significance and required specific treatment of the underlying pathology, highlighting the importance of detailed clinical assessment of the patients presenting with iridocyclitis. Higher frequency of systemic involvement has been reported from the Western countries. Data from Germany showed that 70% of cases of iridocyclitis were idiopathic, while 30% of cases had systemic involvement[16]. Frequency of iridocyclitis in juvenile chronic arthritis in two different studies has been reported as 16% and 56%, respectively[17-18]. The higher frequency of systemic involvement in the Western countries could be due to the higher prevalence of these diseases there. Despite extensive search of literature, no local statistics could be obtained of systemic disease involvement in iridocyclitis. So the present series could also be taken as reference from this area.

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***Ophthalmic "Pastpourri"***

# Rev. Goodrich-the Astute Observer

## *The Story of Astigmatism*

When Goodrich was 16 he wore, for a time, a pair of plain green glasses that assisted only in moderating the intensity of light. He tried concave glasses, but they gave him no assistance. For reading, at one time he used a small convex lens of about ten inches focal distance. However, during his five years as a student he used no visual aids. In November of 1825 he procured a pair of concave glasses, no. 5 or 6, and with them he discovered that a change of position had influence on his sight. He found that any object, long in the horizontal direction, appeared more distinct than a similar object long in the vertical direction. As an example he cited a sailing ship: the crossrigging appeared more distinct than the mast. He set about to make experiments with his naked eye and with his glass. For a young man with perhaps no training in experimental physiological optics, his methods, conclusions, and suggested solution make interesting reading.

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