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Case of Extra-Intestinal Inflammatory Bowel Disease

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Abstract
Inflammatory bowel disease (IBD) is a systemic inflammatory affecting multiple organs apart from intestinal tract, ocular complications account for approximately 5%. These range from uveitis, episcleritis, scleritis and keratopathy. Treatment involves systemic and local ocular therapy in the form of 5-aminosalicylate agents, steroids, immunosuppressants or biological agents in severe disease. We report a case of 21 year old young female presented with bloody diarrhea and acute onset visual loss diagnosed to have severe ulcerative colitis complicated with acute anterior uveitis.
Keywords: *Ulcerative colitis, Anterior uveitis, immunosuppression.*

Case Report

A 21 year unmarried female with no prior co-morbidities presented to emergency room with the complaints of loose stools for a duration of 2 weeks along with intermittent fever. Patient gave a history of initially passing 15 to 20 episodes of loose stools/day which were green colored and non-blood stained. The frequency was later decreased to 10 episodes/day upon receiving oral antibiotics on outpatient basis. Loose stools were associated with intermittent cramping abdominal pain. Patient also had complaints of bilateral knee and ankle joint swellings associated with pain since past 1week. No similar complaints were present in the family.

On clinical examination patient was conscious, obese [BMI-33] and bilateral conjunctival congestion noted. She was febrile with temperature of 101 degree F, had a pulse rate of 96/min, blood pressure of 100/60 mmHg and normal room air oxygen saturations [spO2 -97%].

Systemic examination revealed mildly distended abdomen with tenderness in peri-umbulical region and normal bowel sounds. Patient had no significant abnormality in cardiovascular, neurological and respiratory examination.

Blood investigations revealed

- CBC: Hb-8.5 gm,TC-17800,Platelet count-4.26 L
- RFT[BUN & S Creatinine] –Normal

- S Electrolytes:Na-130meq, K-4.6meq, cl-98meq, Bicarbonate - 20 meq/l
- LFTs -Alkaline phosphate -131, Normal SGOT/SGPT
  Albumin-2.1
  Globulin-4.8
- Lipid Profile and TFT[thyroid function tests] -normal
- BLOOD SUGARS –Normal

ECG showed normal sinus rhythm with no ST-T changes, Chest roentgenogram was normal and a normal ultrasound scan of abdomen.

Patient was intially treated with Inj. Ceftriaxone 2gm iv OD and Inj. Metrogyl 500mg iv tds, NSAIDs. IV Fluids [0.9% saline] were continued.

On day 2 of hospital admission, patient developed decreased vision on both eyes. With vision limited to Hand movements and Light perception. On ophthalmic examination,

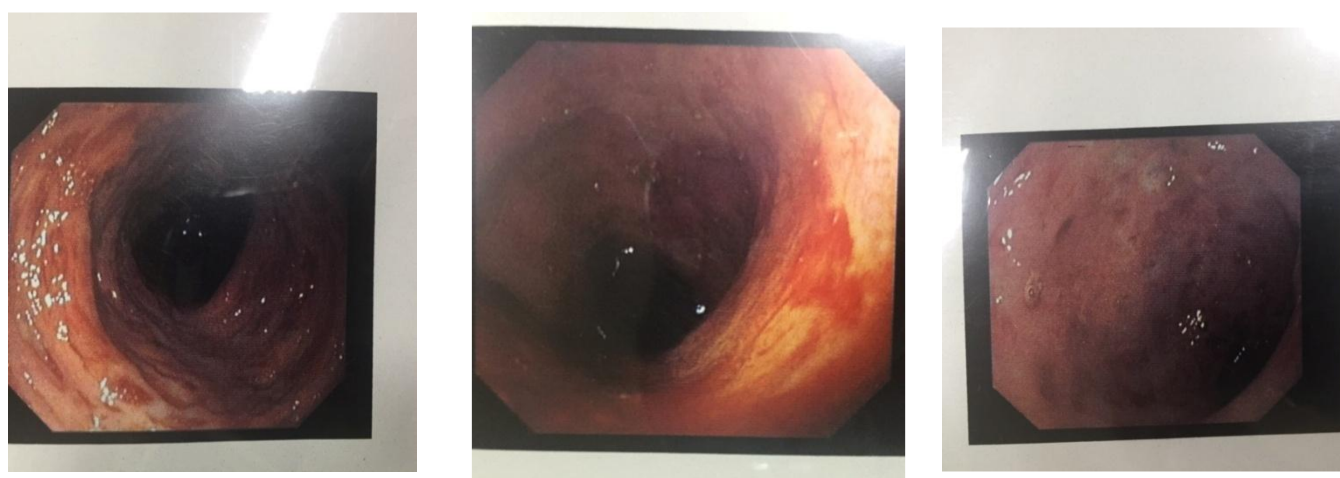
Bilateral corneal haze was present and small pupils which are not reacting to light.

Mutton fat precipitates were seen in both eyes and vision was limited to Hand movements and Light perception only. With these ocular findings and presentation: Patient was diagnosed as ACUTE ANTERIOR UVEITIS. Ophtalmology opinion was sought who confirmed the diagnosis of Acute uveitis and treatment initiated with topical cycloplegic and steroid eyes drops. In view of multiple joint pains and associated Uveitis - following investigations were done :

HLA B27	NEGATIVE
HSV SEROLOGY	NEGATIVE
HIV I , II	NEGATIVE
RA-FACTOR	<10
ANTI CCP	NEGATIVE
STOOL R/E	NORMAL
STOOL C/S	NO GROWTH
TFT	NORMAL
ANA BY IF	NEGATIVE
ESR , CRP	ELEVATED
MANTOUX TEST	NEGATIVE
BLOOD C/S	NO GROWTH

In v/o persistent Diarrhea, CECT abdomen done showed mild ascitis, minimal pleural effusion, non specific mesentric lymph nodes in umblical and right iliac fossa region. No features of mesentric vasculitis. Colonoscopy was performed, revealed severe pancolitis suggestive of inflammatory bowel disease.

Figures 1-3: colonoscopic images showing ‘severe pancolitis’



Histopathalogical Examination of colonic biopsies showed focal ulceration, focal cryptitis and crypt abscess seen with No granulation/Malignancy – s/o IBD [ULCERATIVE COLITIS].

Multiple biopsy taken for the following tests:

CMV-DNA PCR	*NEGATIVE*
HSV I &II	*Negative*
VZV	*Negative*

Treatment

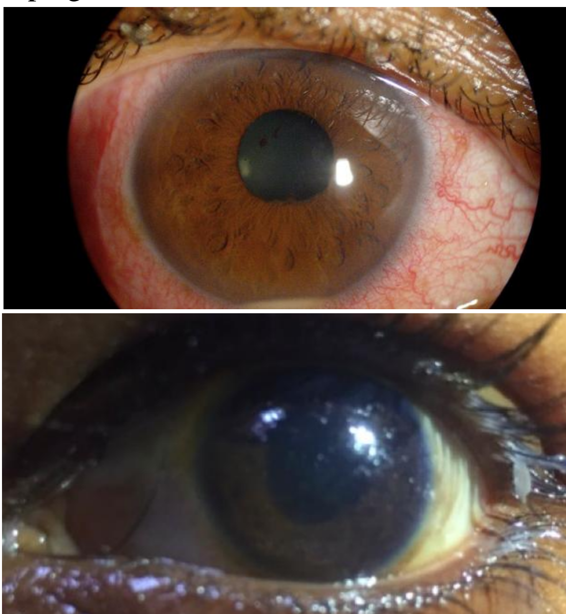
Patient was treated with5-ASA drugs – Oral Mesalamine 800mg 2-2-1, MESALAMINE SUPPOSITORY 500mg BD, Inj IMIPENEM 500mg iv TDS, Oral Prednisolone 40mg OD and Tab Pantoprazole 40mg BD. Eye drops of ATROPINE,MYTICOM [Moxifloxacin and Dexamethasone] and NEVANAC [nepafenac ophthalmic suspension] to bilateral eyes were continue.

Final Diagnosis

1. Inflammatory Bowel Disease With Severe Pancolitis– Ulcerative Colitis with extra-intestinal manifestations:
2. Acute Anterior Uveitis.
3. Inflammatory poly-arthritis

After 5 days of inpatient treatment with above mentioned therapy, patient had full recovery of vision,frequency of stools decreased to <3 / day and were non-blood stained. Patient was discharged with T Mesalamine 800mg 2-2-1, Prednisolone 40mg OD and Oral Calcium 500mg OD. Patient was advised for follow up with Gen Med, MGE and Ophthal departments.

Figure 4-5: Slit lamp images showing before and after treatment of Uveitis with topical steroids and cycloplegics.



Discussion

Extraintestinal Manifestations In IBD are most likely mediated by the inflammatory nature of the disease. Circulating antigen-antibody complexes or autoantibody production against cellular antigens shared by the colon and extra-intestinal organs. Inflammation causing damage to the mucosal intestinal epithelium may allow proteins or microorganisms to pass through the intestinal barrier and cause a reactive lymphoid tissue response. This in turn results in antibody production or antigen-antibody complexes that circulate in the body and cause systemic inflammation.

Ocular manifestations are reported more frequently in patients with CD (3.5%–6.3%) than patients with UC (1.6%–4.6%) and include episcleritis and uveitis. Patients older than 40 years have more likely iritis /uveitis than those younger than 40 years. Patients with colitis and ileo-colitis tend to have a higher risk of ocular involvement compared to those with ileitis alone. Treatment includes topical steroid, topical NSAIDs, topical cycloplegics and systemic steroids with DMARDs in severe cases causing visual loss.

Other extra-intestinal manifestations in IBD are:

Skin manifestations in IBD	Peripheral [>95%] & Axial :(less common 3-5%)
ARTHROPATHY IN IBD	ERYTHEMA NODOSUM {CD 15% , UC 10%}, PYODERMA GANGREOSUM {RARE/ MUCH SEVERE}, SWEET'S SYNDROME: ACUTE FEBRILE NEUTROPHILIC DERMATOSIS, ORAL LESIONS(PERIODONTITIS &APTHOUS STOMATITIS)
Hepato-biliary manifestations in IBD	PRIMARY SCLEROSING CHOLANGITS [UC > CD], SMALL DUCT PSC, FATTY LIVER, GRANULOMATOUS HEPATITIS, AUTOIMMUNE LIVER & PANCREATIC DISEASE, CHOLESTATSIS & GB STONES.