



**“A PROSPECTIVE CASE SERIES TO CHECK THE CLINICAL EFFICACY OF UNANI
MEDICINE IN INFLAMMATORY BOWEL DISEASE (IBD) – AANTON KI SOZISH”**

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ABSTRACT

Inflammatory bowel disease (IBD) is the leading cause of chronic intestinal conditions in the world. Although great strides have been made in the diagnosis, treatment and pathology of IBD; much has yet to be explained. The etiologies and risk factors of this multifactorial condition remain elusive. IBD is a term for a broad spectrum of diseases, but *Crohn's disease* and *Ulcerative colitis* are together termed as **Inflammatory Bowel Disease (IBD)**. The pathogenesis of IBD may involve four major areas: it appears to be immunologically mediated, microbial dysbiosis is usually present, environmental factors trigger symptoms and genetic predispositions may play an important role. Altered immune response is common in both Crohn's disease and UC. As a hyper-immune response plays an important part in IBD, immunomodulators and immune-suppressives have been used as a standard treatment for IBD. Corticosteroids and 5-aminosalicylates have been the traditional treatments for IBD. This study can be helpful for reducing the need of steroids and surgical processes in the patients of ulcerative colitis. There is no direct discussion about IBD in unani literature but instead discussed under the head of **Zusantariya / Sahej / Ishaal** as lesions of Intestine which manifests based on whether upper intestine (Ilium) or lower intestine (colon) is affected. The unani definition of this intestinal disorder is "Passage of stool admixed with blood or mucoid or stool or all the three together". The cardinal symptom of IBD is "blood-mucoid diarrhea" which is observed in Zusantariya. It is also denoted as "Sahej" which means erosion of intestinal mucosa which is frequently seen with IBD in the form of ulcers. In unani literature Safra & Balgham-e-shore is considered as few of the causes among others which when fall (affect) on intestine, damages the intestinal mucosa and scrape off the mucous coating. This scraped off mucous pass along stool admixed with blood - hallmark of IBD. Unani treatment for Crohn's disease and Ulcerative colitis may offer help to protect and restore the digestive tract against damage and prevent the development of further complications of these diseases.

KEYWORDS: Crohn's disease, uveitis, disbiosis, immunomodulators, BMI.

INTRODUCTION

IBD is a term for a broad spectrum of diseases, but *Crohn's disease* and ulcerative colitis are the most common. Crohn's disease affects the small intestine, most often the lower part called the ileum. In some cases, it affects both the small and large intestines. The feature which is characteristic to crohn's disease is patchy inflammation of ileal mucosa in contrast to continuous inflammation of Lt. colon and Rectum seen in Idiopathic Ulcerative Colitis.

There are lot of similarities between Chron's Disease & Ulcerative colitis and they are together termed as **Inflammatory Bowel Disease (IBD)**. Ulcerative colitis

is a systemic disorder and is associated with Migratory polyarthritis, Ankylosing Spondylitis, Uveitis, certain hepatic involvement and skin lesions.

The pathogenesis of IBD may involve four major areas: it appears to be immunologically mediated, microbial dysbiosis is usually present, environmental factors trigger symptoms and genetic predispositions may play an important role. Altered immune response is common in both Crohn's disease and UC. Environmental triggers for IBD may include smoking, diet, stress, gallstones, surgery and exposure to microbes. Other risk factors for UC include prior smoking history (but not current

smoking), family history of UC and high body weight (elevated BMI).

As a hyper-immune response plays an important part in IBD, immunomodulators and immune-suppressors have been used as a standard treatment for IBD. Corticosteroids and 5-aminosalicylates have been the conventional treatments for IBD, although many patients do not respond to these treatments or develop serious adverse effects during prolonged use, including increase in serious infections, reactivation of tuberculosis, development of lymphoma or demyelinating disease. In modern medical science, there is no permanent curative and safe treatment for this disease. This study can be helpful for reducing the need of steroids and surgical processes in the patients of ulcerative colitis

To overcome these limitations of modern/conventional therapy, alternative therapies being tested include herbal medicines and probiotics. Unani treatment for Crohn's disease and ulcerative colitis may offer help to protect and restore the digestive tract against damage and prevent the development of further complications of these diseases.

Epidemiology / Incidence

IBS is a global problem and is more common in women than men. In developed countries, the prevalence of IBD ranges from 3%-25% of adults. Females are affected more than males. Generally seen in the age group of 20 & 25 years, but the condition can arise in any age group. It shows genetic inheritance too.

Etiopathogenesis of IBD

The etiologies and risk factors of these multifactorial conditions remain elusive. Recent studies show some combination of hereditary, genetic, and/or environmental factors may cause the development of IBD.

✘ Three theories have been proposed to explain the Etiopathogenesis of IBD.

1. Involving infectious agent
 2. Involving immunologic reaction
 3. Other mechanisms like psychosomatic, dietary, vascular, traumatic, hormonal and other....
- Theory of Involvement of *Infectious Agent* in causation of IBD:
1. **Viruses** – Rotavirus, Epstein Barr virus, RNA Cytopathic intestinal viruses, ECHO-27.....
 2. **Bacteria** – Pseudomonas like organisms, Enteric Anaerobes, Mycobacterium Kansasii, Chlamydia, Yersinia enterocolitica.
- Theory involving *Immunologic reaction* as a cause of IBD:

1. This theory more acceptable compare to others
2. Cell-mediated reaction, Antibody mediated reaction & Immunologic reactions all show their role in causation of IBD.

3. In patients with IBD, increased levels of IgG are seen but this disease is also seen in patients suffering from agammaglobulinemia.
 4. Cell mediated Immunologic damage is considered as playing main role in causing IBD, as plenty of Lymphocytes & Macrophages are seen in IBD lesions.
 5. K-Cells stand for killer cells, is a kind of Lymphocytes which combines with Antibodies and induces Antibody-Dependent Cellular Toxicity (ADCC).
 6. It means this k- Cells in presence of IgM antibodies proves to be cytotoxic to colonic epithelium.
- The other causes of IBD are Psychosomatic Factors. The personality types like immature, Dependent & passive, often suffers.

Food allergies, primary vascular disease of mural small arteries or arterioles & chronic trauma may all predispose to IBD.

Prostaglandins (PGE₂) is seen elevated in colonic venous blood and Rectal Mucosa in patients with IBD, but still it's not confirmed whether it is responsible for IBD or not.

➤ Environmental triggers for IBD may include smoking, diet, stress, gallstones, surgery and exposure to microbes. Other risk factors for UC include prior smoking history (but not current smoking), family history of UC and high body weight (elevated BMI).

Unani Concept Of IBD

There is no direct discussion about IBD in unani literature but instead discussed under the head of **Zusantariya / Sahej / Ishaal** as lesions of Intestine which manifests based on whether upper intestine (Ilium) or lower intestine (colon) is affected. The unani definition of this intestinal disorder is "Passage of stool admixed with blood or mucoid or stool or all the three together".

The cardinal symptom of IBD is "bloody - mucoid diarrhea" which is observed in Zusantariya. It is also denoted as 'Sahej' which means erosion of intestinal mucosa which is frequently seen with IBD in the form of ulcers. In unani literature Safra & Balgham-e-shore is considered as few of the causes among others which when fall (affect) on intestine, damages the intestinal mucosa and scrape off the mucous coating. This scraped off mucous pass along stool admixed with blood - hallmark of IBD.

In unani literature there is no further differentiation of Zusantariya based on site of lesion as seen in modern literature, mentioned as Crhon's disease and Ulcerative colitis. But is indirectly mentioned as if the patient is having lesion in upper intestine (Ilium) then patient complains of pain above umbilicus and blood is well

mixed with mucous and stool and sense of defecation well be strong and if the lesion is seen in lower intestine (colon), pain will be below the umbilicus and blood & mucous is defaecated first then stool or will be reciprocal.

Morphology of IBD

- The lesions of Ulcerative Colitis invariably begins in Rectum and spread in a retrograde fashion.
- It is disease of continuity.
- Sometime one segment of colon shows active lesion and other segment may be Healing, creating the false impression of skip lesion of Chrons disease.
- In severe form of Ulcerative Colitis, the entire colon and even the ilium may get affected. This is called **Backwash ilietis**.
- **Mucosa** appears hyperaemic, oedematous with loss of mucosal secretions and small focal haemorrhages.
- These haemorrhages develop suppuration and form **Crypt Abscesses**.
- The abscess may result in small ulcerations which fuses and takes irregular shapes. These ulcers are just confined only up to mucosa & sub- mucosa.
- These ulcers may coalesce and denude large areas of mucosa and sometime become deeper into muscularis.
- This results in leaving over the residual islands of edematous hyperaemic mucosa which bulge upwards to form **Pseudopolyps**.
- The long Chronicity and recurrent attacks of ulceroinflammatory disease results in fibrosis and thickening of bowel wall.

Micro morphology

- Presence of Crypt Abscesses
- Ulcerations extending down to Muscularis
- Mucosal infiltration of inflammatory cells – neutrophils, lymphocytes, plasma cells and sometimes Mast Cells.
- In advance cases, certain Dysplastic changes are also seen, forming the soil for carcinoma.

Clinical manifestations

As with other chronic diseases, a person with IBD will generally go through periods in which the disease flares up and causes symptoms, followed by periods in which symptoms decrease or disappear and good health returns.

1. It is usually a relapsing disorder
2. Bloody mucous Diarrhoea
3. Lower abdominal pain & cramps relieved by Defecation
4. Fever
5. Weight loss
6. Extreme tiredness
7. Severe urgency to have a bowel movement.
8. Attack is usually preceded by stressful period
9. Not everyone has all of these symptoms, and some people may have extra symptoms, including a high temperature, being sick (vomiting) and anaemia.

10. Arthritis, painful red eyes (uveitis), painful red skin bumps (erythema nodosum) and jaundice (primary sclerosing cholangitis) are less commonly linked with IBD.

Complications

1. Pericolic Abscess
2. Colonic Carcinoma
3. Ulcers
4. Bowel Obstruction
5. Fistulas
6. Malnutrition – Diarrhea, abdominal cramps & abd pain makes difficult to eat that leads to malnutrition.

Differences between chron's disease & Ulcerative Colitis

- ✓ In UC, ulcerations rarely extend into muscularis as compared to seen in Chron's disease, hence rare Fistula formation.
- ✓ Granuloma formation is seen in Chron's disease. On other side non- specific reaction is seen in UC.
- ✓ Skip lesions are seen in chron's disease and continuous lesions are seen in UC.
- ✓ Inflammatory Tags i.e., Pseudopolyps are seen in UC.

Ilaj bil Ghiza (Dietotherapy)

- Eat in a peaceful environment.
- Eat sitting down and not standing up.
- Meal should be started with a pinch of rock salt, where appropriate.
- Eat freshly cooked, warm food.
- Processed, cold-refrigerated and stale should be avoided.
- Take sips of hot water (don't burn yourself!) throughout the day. Warm water acts like a turbo charge reviving your body's engine to operate with greater horsepower, as your system activates to lower the temperature of the water.
- Food should be properly chewed in the mouth.
- Sip warm water with each meal.
- Say no to ice water for healthy digestion.
- Use wholesome foods and Exercise, meditation for perfect digestion.

Ilaj bil Dawa (Pharmacotherapy)

Since ancient times, herbal medicines have been traditionally used to treat several diseases. The gastroprotective properties of the herbs and their active constituents have been experimentally demonstrated. In support of the traditional claims, several preclinical and clinical studies have provided the scientific basis for the effectiveness of herbal extracts (e.g. Glycyrrhiza glabra) and their active constituents (e.g. flavonoids) in treating GI tract disorders. The discovery and development of anti-ulcer agents such as carbenoxolone from Glycyrrhiza glabra further highlight the presence of pharmacologically active components in herbal extracts and suggests their use as an alternative therapy to treat GI tract disorders. The effectiveness and the mechanisms

of action of crude herbal extracts vary according to the composition of their chemical constituents.

MATERIALS AND METHODS

Selection of patients

A prospective case series was conducted on 3 diagnosed patients of Inflammatory Bowel Disease recruited from the Medical camps conducted under the banner of FUMO (Feminine Unani Medical Organisation), run under the society of *Medivision Institute of Medical Science Association, bearing Registration No. 149/2013*.

These three patients with IBD were consecutively offered the Herbal preparation of following mentioned drugs for a period of 3 months along with proper nutritional regimen and were retrospectively reviewed. Previous medical records were reviewed and further investigations were carried out in this period of 3 months to see the changes or improvement in their health. Out of these three patients, 2 out of 3 showed good or very good response and remaining showed an average improvement in all symptoms including Bowel frequency.

Patients were selected based on certain inclusion and exclusion criteria.

Inclusion criteria

Patients having following symptoms and are between 15 – 35 years of age are considered in this case study:

1. Bloody mucous Diarrhoea
2. Lower abdominal pain & cramps relieved by Defecation
3. Fever
4. Weight loss
5. Extreme tiredness
6. Severe urgency to have a bowel movement.

Exclusion criteria

1. Patients beyond age group of 15 – 35yrs.
2. Pregnancy
3. Patients with major ailments like Hypertension, Endocrine disorders, Autoimmune disorders, Congenital heart diseases, Renal diseases, Liver pathology...
4. Patients with habits like alcoholism, heavy smoking, tobacco chewing...

Selected patients are under study in the following manner:

- History taking
- Physical examination
- Investigations

The drugs which are selected to check their clinical efficacy in the treatment of Inflammatory Bowel Disease are having following actions Mucilaginous, antidiarrhetic, analgesic, anti-inflammatory, antioxidant, antibacterial.

The drugs selected for present case series are

1. Tuqme Kanucha (Seeds)
 2. Gulnar (Flower of Pomegranate)
 3. Belgiri (Dry fruit)
 4. Mulaithi (Root)
- } TGBM sufoof/ Powder

Preparation: All the above mentioned medicines are taken in equal quantity and powdered finely and given as 5gm sufoof morning and evening half an hour before meals.

Tuqme Kanucha

Botanical Name : *Phyllanthus maderas patonsis*
Family : *Phyllanthaceae*
Vernacular Name : *English - Madras leaf flower, urdu – Kanodcha*
Parts Used : Seeds
Temperament : Hot & Dry 2
Chief function : Anti-inflammatory
Other functions : Sedative, Glutinous, Carminative, Laxative, Deobstruent, Diuretic, Demulcent, Anti-diarrhetic, Cardio tonic, Anti – microbial.
Uses : Useful in Diarrhea, Intestinal erosion, Dysentery, Flatulence, Enteropathy, Ascites etc.
Dosage : 5 – 7gm
Chemical composition : Fatty acids – myristic acid, oleic acid, stearic acid, B-Sitosterol, Alkaloids, Anthocyanins, Catecholic compounds, coumarins, flavonoids etc.
Murakkabat : Safoofe Teen, Marhame Dakhalyun

Gulnar (Flower of Pomegranate)

Botanical Name : *Punica granatum*
Family : *Punicaceae*
Vernacular Name : *Hindi – Anar, Urdu – Gulnar, English – Pomegranate*
Parts used : Flower
Temperament : Cold & Dry 2
Chief function : Astringent
Other functions : Tonic for vital organs, Derivative (Rade), Mudammil (Cicatrizant), Mudammil, Mujaffif (Siccative), Tonic for tooth and gums, Anti-helminthic.
Uses : Diarrhea, Dysentery, Peptic ulcers, Bleeding gums, useful in biliousness.
Chemical composition : Gallic acid, ursolic acid, titerpenoids including Maslinic acid, Asiatic acid.
Murakkabath : Sharbathe Habis, Qurse Kharoba, Majoone Busd, Qurs Gulnar, Qurs Tabasheer, Jawarishe Anarain, Sharbate Anar.

Aegla Marmelos (Belgiri)

Botanical Name : *Aegle marmelos*
Vernacular Names : *Bel giri, Bel phal, Bel Kathori, Stone apple, Wood apple, Bilva*
Family : *Rutaceae*
Temperment : Cold 2 & Dry 1
Parts Used : Fruit, bark of tree

Chemical Composition: Ascorbic acid, Tannic acid, Oxalic acid, reducing sugars & non – reducing sugars.

Chief function: Mucilaginous, Anti-dysenteric, Anti-diarrheal, Rectal abrasions.

Pharmacological Actions : Mucilaginous (glutinous) , alterative, astringent, anticonstipative, haemostatic, stomach tonic, antidysenteric, brain and cardiac tonic. The bark is regarded as antipyretic (and cooling)

Medicinal Uses : Fruit is useful in chronic dysentery, GI Bleeding disorders and several relevant digestive tract disorders like dyspepsia, flatulence and chronic diarrhoea with or without fever. Belgiri has the ability to heal ulcers and repair the damaged tissues. It also helps to improve digestion and reduces the symptoms like abdominal pain, nausea, vomiting, and blood in stools, loose motions, and constipation.

Research shows that Belgiri extract has anti-inflammatory, antioxidant, and mast cell calming effects proving protecting effect in inflammatory bowel disease.

The research findings of Nahida Tabassum *et al* mentions the uses of Belgiri (*Aegle marmelos*) for the digestive system. It soothes the digestive system and helps in relieving digestive disorders like colitis and irritable bowel syndrome. It helps in the overall functioning of the digestive system.

Liquoric Root : Mulaithi

Botanical Name : *Glycyrrhiza glabra*

Family : Fabaceae

Vernacular Name : Aslasoos, Beeq – mehak, Mulaithi, Liquorice

Temperament : Hot & Dry 2

Chemical composition : Glycyrrhizin resins, isoflavanoids etc

Chief function : Peptic ulcer, Respiratory disease

Functions : Expectorant, Deobstruent, Carminative, Nervine tonic, Resolvent, Concoctive.

Uses : It is used for various digestive system complaints including stomach ulcers, heartburn, colic & ongoing inflammation of the lining of the stomach (chronic gastritis) Some people take liquorice by mouth for sore throat, bronchitis, cough, and infections. Mulethi contains isoflavonoid alkaloids, which possesses antimicrobial, and anti-inflammatory properties. This helps in preventing inflammatory changes in the bowels and reduces the risk of sepsis or infection in the digestive tract. It also helps to prevent ulceration in the mucosal lining of the colon and rectum.

The research findings of Nahida Tabassum *et al* point towards the anti-inflammatory properties of *Glycyrrhiza glabra*. Diammonium glycyrrhizinate, a substance isolated and extracted from licorice have been shown to improve intestinal inflammation in rats.

As a local applicant, Castor oil were used over belly and covered with a towel or a heating pad for 10, 15, or 20 minutes, two to three times a day, to relieve the abdominal pain associated with IBD.

The data of demographic, pre treatment investigations, post treatment investigations, improvement in clinical manifestations were all recorded.

TABLE 1: Patients Demographics, Prior Treatment & Present Treatment Indices.

S.No.	Age	Sex	Disease	Prior Treatment includes	Recent Treatment
1.	21	F	UC	St., IM	TGBM
2.	30	M	CD	St., ASA	TGBM
3.	35	F	UC	IM, ASA	TGBM

Acronyms:

St., = Steroid

IM = Immunomodulator

ASA = 5-Aminosalicylic Acid Agent

UC = Ulcerative colitis

CD = Chron's Disease

TGBM Powder = Tukhm Kanucha, Gulnar, Belgiri, Mulaithi

TABLE 2: Clinical and Diagnostic Presentation Before & After Treatment.

Patients Profile			Clinical & Digestive presentation before treatment								Clinical & Digestive presentation after treatment							
S. No	Age	Sex	Bloody Mucoid diarrhea	Lower Abdominal cramps	Wt. loss	Urgency for Defecation	CBP	ESR	CRP	Stool Examination	Bloody Mucoid Diarrhea	Lower Abdominal	Wt. loss	Urgency for Defecation	CBP	ESR	CRP	Stool Examination
1.	21	F	Present	Present	+	+	Hb-9%	65	76	B & M +	Absent	Nil	No	No	Hb-11%	15	30	B & M -
2.	30	M	Present	Present	+	+	Hb-12%	90	80	B & M +	Reduced	Nil	No	No	Hb-13%	35	38	B & M -
3.	35	F	Present	Present	+	+	Hb-8%	95	140	B & M +	Rarely seen	Nil	No	No	Hb-10%	40	70	B & M -

Acronyms:

Hb – Haemoglobin percentage

CBP - Complete Blood Picture

ESR – Erythrocyte Sedimentation Rate

CRP – C Reactive Protein

B & M – Blood & Mucous

From the data obtained from the Case series done on 3 patients, giving them Herbal preparation for the period of 3 months, it has been observed that there is an improvement in symptomatology of IBD with drastic improvement in patient 1, moderate improvement in patient 2 and mild improvement in patient 3. It is also observed from above data that the patient having severe symptoms and are much deviated from normal diagnostic values are showing less response to the medicine compared to patients having mild to moderate range of symptoms and average diagnostic deviations.

If the patient continued the same medicine for still longer period of time, we can expect much improvement both clinically and in Diagnostic values. This case series serves to highlight the importance of Herbal medicine (unani) as an adjunct to the limited existing management options of IBD.

DISCUSSION AND CONCLUSION

IBD is a term for a broad spectrum of diseases, but *Crohn's disease* and *Ulcerative colitis* are the most common. There are lots of similarities between Chron's Disease & Ulcerative colitis and they are together termed as **Inflammatory Bowel Disease (IBD)**. The etiologies and risk factors of this multifactorial condition remain elusive. The pathogenesis of IBD may involve four major areas: it appears to be immunologically mediated, microbial dysbiosis is usually present, environmental factors trigger symptoms and genetic predispositions may play an important role. As a hyper-immune response plays an important part in IBD, immunomodulators and immune-suppressives have been used as a standard treatment for IBD. Corticosteroids and 5-aminosalicylates have been the traditional treatments for IBD.

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Unani treatment for Crohn's disease and ulcerative colitis may offer help to protect and restore the digestive tract against damage and prevent the development of further complications of these diseases. This prospective case series conducted on 3 diagnosed patients of Inflammatory Bowel Disease, has been given Herbal preparation, in a dose of 5gm morning and evening before meals for a period of 3 months and intermittently prognosis in their clinical presentation and Diagnostic values were recorded. I have seen much relieve in symptoms in all the 3 patients with average improvement in diagnostic values and decrease in dosage of steroids and Immunomodulators to minimum or even quitting completely. This case series serves to highlight the importance of Herbal medicine (unani) as an adjunct to the limited existing management options of IBD.

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