Using Ulcerative Colitis As A Basis For Modern Diagnosis

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ABSTRACT

The significance of ulcerative colitis diagnosis in conventional medicine, the many contemporary diagnoses of orcalous ulcerative colitis, the scope of the diagnostic using index and scale, and the established diagnosis of tugri are all discussed in this article.

Keywords: ulcerative colitis, Truelove-Wits, Mayo Index, symptoms, Shoreder scale.

The chronic inflammatory bowel illness known as ulcerative colitis mostly affects the colon and occasionally the rectum. The disease's epidemiology (prevalence, contributing factors, and influencing variables) shows that ulcerative colitis is widespread and mostly occurs in Western nations (Australia, the United States, Canada, and Europe). Particularly among young individuals, it is most prevalent between the ages of 19 and 45. Countries differ in the disease's incidence (number of new cases) and prevalence. Although it is more prevalent in Western nations, it is comparatively less widespread in Asia, Africa, and South America.

Additionally, emerging nations like Uzbekistan are seeing an increase in the prevalence of inflammatory bowel illnesses. Developmental, hormonal, and environmental variables can all have an impact on this.Public health is severely impacted by the proliferation of intestinal disorders in several parts of Uzbekistan, particularly in major towns and industrial hubs. Inflammatory bowel disorders, such as ulcerative colitis, can rise in tandem with increased urbanization and industrialization.

In Europe, there are 6–10 new cases of ulcerative colitis for every 100,000 persons. This number is far lower in other places, including Asia. In many cases, ulcerative colitis is sexually distributed equally, meaning that it affects men and women on the same level. But according to some research, women are more likely to get sick. The majority of patients with ulcerative colitis are young and middle-aged,

particularly those in the 19–30 age range. Although the condition is more common in young individuals, it might show signs of remission and return in the years that follow. Although it is somewhat uncommon, new occurrences of the illness can occasionally be seen in older adults (those over 40).

It was discovered that ulcerative colitis has a hereditary propensity. The condition is more prevalent in families. Other family members are at a higher risk of developing ulcerative colitis if many members of the same family already have the condition. In certain cases, the progression of the illness may be influenced by the genetic marker HLA-B27. The development of illness is also significantly influenced by environmental variables. For example: diets in Western nations (high-fat, processed food) can be connected with inflammatory bowel illnesses. Stress, infections, medications, and parasites are some of the elements associated with urbanization and industry that can cause disease in industrialized nations.

The disease's course may also be impacted by vitamin D levels. Low levels of ulcerative colitis have been linked to vitamin D insufficiency, according to studies. Each patient has a different level of inflammation and a different rate of ulcerative colitis advancement. While some patients often have inflammation and relapses, others might live with moderate inflammation for an extended period of time.Damage to the rectum may be the first sign of the disease, which can later spread to the entire colon. In many instances, the illness just affects the rectum and leaves the upper portion of the large intestine unaffected. There are active and remission (improvement) phases for ulcerative colitis.

In this instance, as the illness advances to a stage of remission, the symptoms lessen or go away entirely, although some patients have a disease return.During the activation of inflammation, severe symptoms may worsen.Clinics and physicians frequently carry out epidemiological studies of ulcerative colitis. Research offers insights on patient symptoms, care, and quality of life. Since ulcerative colitis symptoms can occasionally be mistaken for those of other illnesses, the diagnosis is still not established promptly in Uzbek institutions. Additionally, most of the time, diagnostic procedures like colonoscopies and biopsies are not carried out.However, the diagnosis and treatment of inflammatory bowel illnesses can be improved with more physicians and medical facilities specializing in this condition.

Although there is little data on genetic risk and familial distribution in Uzbekistan, inflammatory bowel disorders can occasionally be linked to family history.

Doctors must do a variety of tests and analyses in order to diagnose and treat ulcerative colitis. These analyses aid in assessing overall health, intestinal health, and the extent of disease-related inflammation.
The following are the primary tests and analyses required to diagnose ulcerative colitis:
1. Analysis of blood: General blood analysis: ulcerative colitis frequently manifests as anemia, inflammation, and leukocytosis (an increase in white blood cells). Leukocytosis, or an increase in white blood cells, is a common indication.Anemia is a disorder that may be brought on by intestinal blood loss. elevated quantities of platelets, which aid in blood coagulation.
Indicators of inflammation: C-reactive protein (CRP) is a marker of inflammation, and ulcerative colitis is associated with a higher level of this protein. Another measure of the inflammatory process is the erythrocyte sedimentation rate (ESR).
2. Stool (intestinal waste) analysis: this method can be used to differentiate between infections and irritable bowel syndrome. These analyses are helpful in getting rid of parasites, microbial infections, and other illnesses.
3. Endoscopy: The primary test used to confirm the diagnosis of ulcerative colitis is a colonoscopy. Using a colonoscope, the intestinal wall is inspected to look for edema, wounds, inflammation, and other abnormalities. Endoscopy biopsy samples may be seen under a microscope.
4. Biopsy: To ascertain the kind and severity of the illness, a biopsy sample—a little portion of intestinal tissue—is taken during the

colonoscopy procedure. This test looks at the presence of new cells and the extent of inflammation.

5. Barium contrast rengen examination: barium contrast rengen (barium enema) might be used for an intestinal examination in the event that a colonoscopy is not feasible. This technique determines the degree of inflammation as well as alterations in the intestinal walls and morphology.

6. Genetic testing: genetic testing can be used to investigate the likelihood and causes of an illness in some people, particularly if it runs in the family.

7. Fecal calprotectin test: this test measures the level of inflammation in the body. This test can reveal whether intestinal inflammation is present and how active the illness is.

8. Computed Tomography (CT) or Magnetic Resonance Imaging (MRI): for better intestine detection, CT or MRI scanning may be advised in some situations. These methods aid in describing the intestine's composition and motion.

9. Ultrasonography: An ultrasound examination can be used to check the gut. This test gathers information on the intestinal anatomy and size, as well as the level of inflammation.

10. Vitamin and mineral testing: Some individuals with ulcerative colitis may have deficiencies in vitamin D, iron, and other microelements. To screen for these illnesses, blood tests can be conducted.

Clinical evaluation standards called Truelove and Witts were created to evaluate the severity of ulcerative colitis. These factors aid in determining the patient's health status, the length of the illness, and the level of inflammation. In order to evaluate the severity of ulcerative colitis and the efficacy of treatment, the Truelove and Witts criteria was created in the 1960s. They are determined by the following standards:

Table 1: The UC attack's severity based on the Truelove-Wits criterion

INDICATOR	**SEVERITY OF THE CURRENT EXACERBATION (ATTACK) UC**		
	MILD	**MODERATE**	**SEVERE**
Frequency of stool Blood stool frequency , times/day	< 4	≥ 4, if:	≥ 6, if:
Heart rate, beats/min	B Within the individual norm	≤ 90	> 90 or
Temperature, °C	Normal	≤ 37.5	> 37.8 or
Hemoglobin, g/L	115	≥ 105	< 105 or
ESR, mm/ h	B Within the normal	range≤ 30	> 30
CRP, mg/ l	B Within the normal	range≤ 30	> 30
Contact vulnerability (bleeding) of the colon mucosa	No	Yes	Yes

Generally speaking, the Truelove-Watts criteria are used to determine severity in Uzbekistan clinical guidelines. However, they also incorporate the idea of a "severe or extremely severe attack" of UC, which is defined by high frequency and daily stool volume, severe hypoproteinemia, hypoalbuminemia, and protein-free edema (critical albumin levels, which are largely The value of 26 g/l, electrolyte imbalances, elevated C-reactive protein (CRP), and increasing anemia are the decisive factors for surgery. Such colitis is treated differently from other types of colitis. Conservative treatment is typically ineffectual in these situations, and during the initial days of exacerbation, surgery (colectomy) is advised. The Mayo index is often used in Uzbekistan and international clinical practice to evaluate the

Witts and Truelove Assessment Scale:Mild (Mild): if the patient satisfies the subsequent requirements: 1–3 episodes of diarrhea.low blood in the stool.The temperature of the body is normal.The heart rate is within normal limits. little weight reduction (2–5%).If the patient experiences diarrhea four to six times, it is

considered moderate. Stools with significant amounts of blood.The temperature of the body is somewhat elevated.There is an increase in heart rate.Average decrease of weight (5–10%).If the patient experiences diarrhea seven times or more, it is considered severe.Lots of bloody excrement.The body temperature is at least 38°C.There is a high heart rate(100 beats or higher).significant weight loss of at least 10%.

One of the criteria for clinical evaluation of ulcerative colitis is the Meyo Index, often known as the Mayo score or the Mayo Clinic Score. It is used to assess the severity of the condition and track the patient's course of therapy. These indekste ratings are determined by a number of criteria, and they offer insight into the severity or alleviation of the illness. Meyo index parameters: There are four primary parameters that make up the Meyo index:

Table 2: Attack severity as determined by the UC activity index (Mayo Index)

Criterion	**INDEX (points)**			
	0	**1**	**2**	**3**
Stool frequency	Normal	1-2 per day more than usual	3-4 per day more than usual	5 per day more than usual
Impurity Blood impurity in the stool	No	Streaks	Visible blood	A lot of blood
Condition Mucosal condition membrane	Normal	Minimum activity (1 point according to Schroeder School of Medicine)	Moderate activity (2 points on the Schroeder scale)	Marked activity (3 points on the Schroeder scale)
The general assessment of the doctor	Normal	condition Normal Satisfactory	Moderate	Severe
The severity UC attack severity (partial or incomplete Mayo index) is determined by the sum of points of 4 parameters from the table:**0-2 points** – remission (with an the score of rectal bleeding and endoscopic mucosal activity = 0 points); **3-5 points** – mild attack; **6-9 points** - moderate attack; **10-12 points** – severe attack.				

Meyo Index Score: The Meyo index's overall score can be anything from 0 to 12. The severity of the illness is indicated by these points:A score of 0–2 indicates mild ulcerative colitis. Three to five points: mild ulcerative colitis.

6–12 points: ulcerative colitis of severe severity. Identifying the disease's severity: this indicator aids in precisely determining if the illness is mild, moderate, or severe. Treatment monitoring enables you to track changes in the patient's look in order to evaluate how well the treatment is working. Evaluation of illness progression: helpful in tracking the patient's state and the phases of disease withdrawal. Mild-grade ulcerative colitis (0–2 points) may require little treatment, and many individuals may carry on with their regular lives. In intermediate grade (3-5 points) ulcerative colitis, medication may be required to control symptoms and decrease inflammation. In cases of severe grade (6–12 points) ulcerative colitis, intensive therapy may be necessary, including immunosuppressive medications or steroids.

The severity of inflammation and the patient's symptoms are often the foundation of the Schroder scale. This scale has a number of evaluation criteria, such as:

1. Mild diarrhea: occurs in tiny amounts (one to three times).
Diarrhea 4-6 times on average. Severe: at least seven episodes of diarrhea.
2. Mild: low blood in the stool.Average: a blood volume that is reasonable.
Heavy: a large amount of bloody excrement .
3. Normal body temperature is up to 37°C.Mean temperature: 37.1°C to 38°C.Over 38°C is heavy.
4. Normal heart rate: The heart rate ranges between 60 and 100 beats per minute.Heart rate increased from 101 to 120 beats per minute.Heavy: 121–140 beats per minute is a very high heart rate.

Overall evaluation using the Shoreder scale: Mild (Mild): if the patient meets the criteria listed below: diarrhea one to three times, mild blood in the stool, a normal or moderate body temperature, and a normal heart rate. Average (Moderate): if the patient satisfies the subsequent criteria: 4–6 episodes of diarrhea, moderate blood in the stool, a moderately elevated body temperature, and an accelerated heartbeat. Severe (Severe): if any of the following symptoms apply to the patient: 7 or more episodes of diarrhea, bloody feces, elevated body temperature, and a very rapid heartbeat

When treating individuals with ulcerative colitis, it is crucial to sometimes employ the curative enema, also known as rectal cleansing, but only under a doctor's supervision. An enema can be used to cleanse the intestines or provide medication straight into the rectum. It is utilized for local medication delivery, inflammation reduction, and purification of inflammatory regions.

Conclusion

1. ulcerative colitis is mostly a childhood condition that is highly prevalent in Western nations due to hereditary and environmental causes. A customized strategy and course of therapy are required since the disease's spread and level of inflammation might differ.
2. The features of ulcerative colitis's spread vary by Uzbekistan's regions. In cities and other industrialized locations, inflammatory bowel disorders are more prevalent. Although the disease is likely to develop and spread extensively, it may be identified and treated early on via advancements in diagnostics and medical care.
3. When determining the severity of ulcerative colitis, the Truelove and Witts criteria is essential. It is used to track the disease's course and decide on the patient's treatment choices. These parameters give physicians crucial information to assess the disease's severity.
4. When evaluating ulcerative colitis, physicians use the Meyo index to gauge the disease's severity. It is a crucial instrument for assessing the patient's state and creating a plan of care.
5. A clinical evaluation tool for determining the severity of ulcerative colitis or other inflammatory bowel illnesses is the Shoreder scale . The severity of the disease is assessed using this scale by looking at the patient's symptoms and clinical state.
Symptoms (diarrhea, bloody stools, fever), the level of inflammation, and other general signs are often evaluated using the Shoreder scale.
The Shoreder scale aids in determining the severity of inflammatory bowel disorders, including ulcerative colitis. Doctors use this scale to assess the patient's status and modify the course of therapy.

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