

PATHOPHYSIOLOGICAL AND RADIOLOGICAL ASPECT OF ULCERATIVE COLITIS A LIFESTYLE DISORDER OF MAHASTROTAS

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ABSTRACT

Ayurveda considers *strotas* as an important structural and fundamental entity of Human body. *Mahastrotas* is considered to be an organ or structure or lumen which is from mouth to anus entitled *Annavaha strotas* and *Purishvaha strotas*. In present scenario, the food habits, food contents, lifestyle are changing very rapidly which are mentioned causative factors for *Annapachan vikriti* (indigestion) leads to *Agnimandhya*, *Ajirna*, *Grahani*, *Amlapitta*, *Atisara*, *Pravahika*, and *Arsha*. Untreated *Pravahika* may leads to *Raktaj Pravahika* which in chronic stage considered to be correlated with Ulcerative Colitis in modern

aspect.

KEYWORDS: *Mahastrotas*, *Raktaj Pravahika*, Ulcerative Colitis.

INTRODUCTION

Ayurveda is an ancient medical science and *strotas* is main fundamental entity. *Ayurveda* considers *strotas* as an important structural and fundamental entity of human body. *Mahastrotas* is considered to be an organ or structure or lumen which is from mouth to anus entitled *Annavaha strotas* and *Purishvaha strotas*. *Annavaha strotas* is one of the important *strotas* in body described well with *strotodusti hetu*, *lakshana*, *moolstan* in *vimanstan* by *Acharya Charak*. According to *Charakchikitsastan adhyay* 15, all types of disease initiated by the *Annavahastrotas vikriti* and well explained the *chikitsa* according the minute differences in diagnosis of all type of this *strotas vikriti*.

In present scenario, the food habits, food contents, stressful and busy lifestyle are changing

very rapidly which are mentioned causative factor for *Annapachan vikriti* (indigestion) leads to *Agnimandhya*, *Ajirna*, *Grahani*, *Amlapitta*, *Atisara*, *Pravahika* and *Arsha*. Unteated *Pravahika* may leads to *Raktaj Pravahika* which in chronic stage considered to be correlated with Ulcerative Colitis in modern aspect.

Ayurveda science explained well all diagnostic tools with proper symptoms for early diagnosis. The causative factors also told by classical text. *Ayurveda* focused *hetu vicchar* very well which plays an important role in a measuring control for the particular *Aannavaha strotodusti* which plays an important role in above major and critical disease.

Gastrointestinal disorders includes such *vikriti* as functional Gastrointestinal disorders i.e. the disorders are those in which the gastrointestinal tract looks normal but does not work properly like constipation, irritable bowel syndrome and the structural gastrointestinal disorders i.e. the disorders are those in which the bowel looks abnormal and does not work properly like haemorrhoids, fissures, anal fistula, perianal infections, diverticular diseases, colitis, colon polyps and cancer. Sometimes the structural abnormalities need to be removed surgically.

Today various pathological and radiological inputs are available for diagnosis of ulcerative colitis but in *Ayurveda* there is focussed on *hetu vicchar* and diagnosed by minute observations of *lakshanas*.

Hence an attempt is made to understand the *Jirna Raktaj Pravahika* with pathophysiological and radiological aspect of Ulcerative Colitis, a life style disorder of *Mahastrotas*.

Aim: To study the pathophysiological and radiological aspect of Ulcerative Colitis, a lifestyle disorder of *Mahastrotas*.

Objective: To study the correlation between *Jirna Raktaj Pravahika* and Ulcerative Colitis.

Material and Method: This is a conceptual study for which various *Ayurvedic* and modern texts, published articles, research papers and information available on internet are used.

LITERATURE REVIEW

Raktaj Pravahika

According to *Ayurveda* excessive intake of *Katu*, *Amla*, *Lavana rasa*, *Guru*, *Snigdha*, *Ruksha*,

Ushna, Sheeta, Ati drava, Teekshna food stuff promotes *Pravahika* disease. *Virudhashana, Adhyashana, Vishamashana, Pramitashana* are *hetus* of *Pravahika*. *Bhay, Shok, Krodh, Irsha* are *mansika hetu* of disease. *Arsha, Grahani, Krimi, Atisara*, make *pakvashaya* favourable ground for development of *samprapti of Pravahika*.

Avipaka and abdominal bloating are *poorvarupa* of *Pravahika* disease. *Pitta* and *Raktprakopak hetu* play vital role in formation of disease prognosis. *Kapha* adheres to the walls of *pakwashaya* (large intestine) internally, because of that *vata* requires more force to expel *kapha* out. The patient develops *pravahan* i.e. forceful defecation. Thus by more and more *pravahan*, there is repeated defecation containing *kapha*. This process is called as *Pravahika* and it is characterised by defecation of small stool with small quantity of *shleshma* (mucus) and *Rakta* (if *pitta* is involved).

Untreated *Pravahika* may leads to *Raktaj Pravahika* having the symptoms same as the symptoms described of Ulcerative colitis in modern aspect.

Ulcerative Colitis

There are several types of colitis condition that causes an inflammation of bowel includes Infectious Colitis, Ulcerative Colitis, Crohn's disease, Ischemic Colitis, Radiation Colitis.

Ulcerative colitis is a chronic inflammatory bowel disease that causes inflammation and ulcers in the digestive tract. Ulcerative colitis is usually in the innermost lining of the large intestine (colon) and rectum forms range from mild to severe having symptoms are abdominal pain or discomfort, blood or pus in stool, fever, weight loss, frequent recurring diarrhoea, fatigue, reduced appetite, tenesmus i.e. sudden and constant feeling that have to remove bowel.

Alcohol, caffeine, carbonated drink, dairy products, dried beans and legumes, dried fruit, foods that have sulphur or sulphate, food high in fibre are the trigger factor for Ulcerative colitis.

Pathophysiological and Radiological Aspect of Ulcerative Colitis

Diagnosis of Ulcerative Colitis is based on a combination of clinical symptoms, laboratory tests and imaging data. Imaging of morphological characteristics of Ulcerative Colitis includes the assessment of mucosal alteration, transmural involvement and extra intestinal manifestations. No single imaging technique serves as a diagnostic gold standard

to encompass all disease manifestation.

To help confirm diagnosis of the Ulcerative Colitis we may have one or more of the following tests and procedures i.e. Blood Test, Stool sample Test, X-Ray, USG, CT Scan, MRI, Colonoscopy, Flexible Sigmoidoscopy, Capsule Endoscopy, Esophago-gastroduodenoscopy, Endoscopic retrograde cholangio pancreatography (ERCP), Double balloon endoscopy.

1) Blood Test

CBC – Decrease in haemoglobin i.e. Anaemia which is the symptom of Ulcerative Colitis. Anaemia happens when RBCs decrease and there are not enough of them to carry oxygen towards tissue. There is increase in WBC, low level of protein albumin and elevated C-Reactive Protein level. All are above are the indications of inflammation in body. Raised serum alkaline phosphate will point towards hepatic complications of Ulcerative Colitis.

2) Stool Test

WBC in stool can indicate Ulcerative Colitis. A stool sample can also help to rule out other disorder such as infection caused by bacteria, viruses, and parasites.

3) X-Ray

A) Conventional X-Ray – A conventional X- Ray of abdomen can show narrowing of intestine or can intestinal blockage possibly from inflammation or scarring. Doctor might have order X- Ray to make sure another kind of problem like perforated colon and also to rule out certain Ulcerative Colitis complication.

B) Contrast X-Ray – This diagnostic test allows doctor to evaluate intestine by tracking the movement of a thick, chalky liquid called barium dye. The barium dye coats the lining of the bowel, creating a silhouette of rectum, colon and a position of intestine that visible on X-Ray.

4) USG (Ultrasonography)

Transabdominal USG is frequently used to detect complications of ulcerative colitis. It has been proposed that USG can distinguish between ulcerative colitis and Crohn's disease based on the degree of thickening and changes in the layered structure of the intestine.

5) CT Scan

A CT Scan takes simultaneous X –Ray from different angle to create a cross sectional

image of the bowel that cannot be seen with other test. CT Scan help doctor to diagnose Ulcerative Colitis and determine the location and extent of disease. They can also help to check for potential complications and rule out conditions with similar symptoms such as appendicitis.

6) MRI (Magnetic Resonance Imaging)

Large tube shaped magnets use a magnetic field and radio waves to create images. MRI is very helpful in diagnosing and imaging of Ulcerative Colitis.

7) Endoscopy

This test uses a thin, flexible tube with a lighted camera inside the tip called endoscope that allows doctor to explore the different parts of gastrointestinal tract. This technique includes test such as

- a) **Sigmoidoscopy:** By this method examines the sigmoid i.e. the lower third of large intestine (the rectum and sigmoid colon). The earliest sign of Ulcerative Colitis is loss of vascular pattern, lateral mucosa becomes granular with friability. Finally the mucosa might bleed spontaneously. These may be extensive ulceration and appearance of pseudopolyps.
- b) **Colonoscopy:** Provide a view of entire colon and helps doctor to determine whether patient have crohn's disease or ulcerative colitis.
- c) **Capsular Endoscopy:** Uses a tiny camera, that patient swallow in a capsule. They takes as many as 5000 images which are transmitted to a computer. Doctor then downloaded this images on monitor to check for signs of Ulcerative Colitis. Once it has give through diagnostic tract then camera passed through stool.
- d) **Esophagogastroduodenoscopy:** Also reffered to as upper gastrointestinal endoscopy, examines three areas that can be affected by Crohn's disease i.e. the esophagus, stomach and the duodenum (the first part of intestine).
- e) **Endoscopic retrograde cholangio pancreatography (ERCP):** This procedure combines upper gastrointestinal endoscopy and x-ray to explain bile duct in the liver and pancreatic duct which may be affected in some people of Ulcerative Colitis.
- f) **Double balloon endoscopy:** A longer scope with two inflatable balloons attached is used to explore areas of the small bowel where standard endoscope are unable to reach.

CONCLUSION

It can be concluded that the vitiated *Rakta* along with *Kapha* and *Vata* diminishes the

Agni and reaches the *pakvashaya* (intestine) and blood comes out with *Kapha* known as *Raktaj Pravahika*. The untreated *Raktaj Pravahika* leads to *Jirna Raktaj Pravahika*. The signs and symptoms described about *Raktaj Pravahika* in *Ayurveda* is *Toda* (prickling pain) in *Hridaya* (cardiac region), *Nabhi* (umbilicus), *Payu* (rectum), *Udara* (abdomen), *Gatra Avasad* (flaccidity or emacination) of the body, *Vitsang* (obstruction of flatus and feces), *Adhamana* (distention of abdomen) and *Avipaka* (indigestion) as *Purvarupavasta* and defecation of *Mala*(stool) containing *sleshma*(mucus) and *Rakta* (if associated with *pitta*) repeatedly accompanied by excessive tenesmus or *pravahan* as a *Rupavasta* of *Raktaj Pravahika* is same as the signs and symptoms described about Ulcerative Colitis in modern text.

So we can correlated *Jirna Raktaj Pravahika* mentioned in *Ayurveda* text with Ulcerative Colitis of modern aspect can be confirmed by performing various pathological and radiological procedures to understand all aspect of disease which is necessary before proceeding to treatment.

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