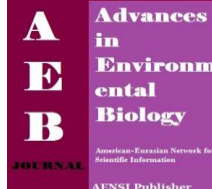




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### Functional Gastrointestinal disorders (FGID) and Iranian Traditional of Medicine (ITM)

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#### ABSTRACT

Functional Gastrointestinal Disorders (FGID) are the common disorders in gastroenterology which can be observed in each part of the gastrointestinal tract from esophagus to rectum. The causes of these disorders are not explained completely by recent laboratory and anatomical findings.

ROME III criteria are the recognition criteria about the FGID which are divided into 6 subgroups based on 5 anatomical regions and include:

1. Esophageal
2. Gastroduodenal
3. Bowel
4. Functional abdominal pain
5. Functional gallbladder and Sphincter of Oddi disorders
6. Anorectal.

Based on Iranian Traditional of Medicine (ITM) books it seems that gastric dis-temperments have a lot of similarities with the FGID and its criteria in ROME III.

In this article, discussion is about relationship between them in ITM and conventional medicine.

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### INTRODUCTION

#### Definition:

Functional gastrointestinal disorder (FGID) is a common disorder in gastroenterology which can be seen in each part of the gastrointestinal tract from esophagus to rectum and the causes of these disorders are not explained completely by recent laboratory and anatomical findings(1-4).

#### Rome Committee and advancement of its orders :

Beginning of it was 15-20 years ago and by advancement in information about the functional disorders of digestive system; academic environments became interested in categorizing a system which can be used for research and improvement.

In order to start, the group consensus was needed through Delphi approach(5) and this period has been created three times now and its collection was named as ROME I, II and III during 3 periods(6).

FGID Categorizing based on signs had many bases.(7)

Thus in order to special location in the digestive system, the epidemiological findings have defined a base for changes in this categorization.(8-10)

The other numerous effective factors like motor performance deficits or abnormal movement, high visceral sensitivity and periodic brain function disorder are another issue which are the bases for categorizing.(7)

Epidemiologic findings in western countries have shown same results about the disease(11, 12)but it is possibly lower in African and Asian countries.(13, 14)

These differences are observed and maybe related to recognition criteria.(15)

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In addition in order to search and treat considering the recognition standards such as DSMIV(16) and rheumatology,(17) it is needed that this criteria help recognition and treatment of the functional disorders based on signs.(7)

Numerous limitations exist for using the criteria based on the signs. In recent years, histology findings determined that there is no difference between the functional and organic disorders.(18-20)

Functional gastrointestinal disorders (FGID) are better categorized by their motor and sensory physiology and the brain connections. At the same time, FGID can have clinical interventions with other disorders. The signs of functional disorders depend on various combination of physiologic parameters: increasing the motor function, increasing the visceral sensitivities, changes in immunity function and mucositis (including changes in microbial field) and changes in modifying the nervous system of the brain ( such as mental, social and environmental effects and its profiles ) for example fecal incontinence may be first a motor functional disorder while the functional abdominal pain syndrome is a result of increases in reception of the normal receive visceral center.(21)

IBS has various factors and they are a combination of abnormal kinematic factors, abnormal visceral sensitivity, mucosal immune regulating collide, changes in bacterial flora and adjustment collide in CNS-ENS.(21)

Distribution of these factors may be found in different individuals or at different times in a person. The clinical meaning of functional gastrointestinal symptoms in different states separator is shown in Table 1, it can result in reliable recognition and better treatment.(21) The overall grouping of functional diseases of the stomach is given in Table 1.

Functional gastrointestinal disorders in adults, including 28 subtypes:

**Table 1:**

functional esophageal disorders	Functional heart burn	
	Functional chest pain of presumed esophageal origin	
	Functional dysphasia	
	Glubous	
functional gastroduodenal, disorders	Functional dyspepsia	Post prandial distress syndrome(PDS)
		Epigastric pain syndrome
	Belching disorders	Aerophgia
		Unspecified excessive belching
	Nausea & vomiting disorders	Chronic idiopathic nausea(CIN)
		Functional vomiting
Cyclic vomiting syndrome(CVS)		
Rumination syndrome in adults		
functional Bowel disorders	Irritable bowel syndrome(IBS)	
	Functional bloating	
	Functional constipation	
	Functional diarrhea	
	Unspecified functional bowel disorders	
Functional abdominal pain syndrome(FAPS)		
functional gallbladder& sphincter of disorders SO)(oddi	Functional gallbladder disorder	
	Functional biliary SO disorder	
	Functional Pancreatic SO disorder	
Functional anorectal disorders	Functional fecal incontinence	
	Functional anorectal pain	Chronic proctalgia
		Levator ani syndrom
		Unspecified functional anorectal pain
	Proctalgia fugas	
	Functional defecation disorders	Dyssynergic defecation
Inadequate defecatory propulsion		

These are diagnostic criterions based on the symptoms which are not justified with other disorders based upon pathophysiology.

The scientific findings in the pathophysiology of FGID.(21)

1. Genetic predisposition.
2. Initial family environment.
3. Abnormal movement
4. visceral hypersensitivity
5. Inflammation.
6. Bacterial flora.
7. brain-intestinal interactions through CNS-ENS.

*Classification of patients and how to treat functional disorders of the digestive system:*

Pathways of treating patients and studying the disease in Rome III book based on several studies (21-25) are listed in full with classifying the patients into three groups with mild, moderate, and severe symptoms and

signs. The functional gastrointestinal disorders (FGID) are common in gastroenterology from the esophagus to the rectum.(6, 21, 26, 27)

This common yet fully laboratory findings and anatomic is not justified today. ROME III criteria are the recognition criteria about the FGID which are divided into 6 subgroups based on 5 anatomical regions and include:

- 1- Esophageal
- 2- Gastroduodenal
- 3- Bowel
- 4- Functional abdominal pain
- 5- Functional gallbladder and Sphincter of Oddi disorders
- 6- Anorectal.

*Relationship between FGID and stomach dis-temperament:*

These points represents healthy digestive system (complete digestion) from Avicenna's view. (28) Food safety in quality and quantity is expressed in the resources books of Iranian Traditional of Medicine (ITM) as one of the preconditions to complete digestion.

1. The food is well taken.
2. In the stomach is not any gravity (heaviness) after digestion.
3. Absence of the following symptoms:
  - stomach noises
  - bloating
  - Burp (the smell of tobacco (smoke) or rancidity smell or sour taste mouth)
  - hiccups
  - stomach Shake
  - relaxation (stretching and cramping without wind)
4. Food staying in the stomach is moderate time.
5. Food displacement time from the stomach is deserved.(no before and no after it)
6. Sleep duration is moderate.
7. Awakening can be done easily and quickly.
8. No puffy eyes.
9. No heavy head.
10. Easy bowel movements.
11. lower abdomen is raised before defecation.

While addressing the symptoms, avecinna points out that this symptoms are the true sign of encompass (means the twine and wrapping) food by stomach and healthy food in quality and quantity and stomach strength.(28)

Note: if the stomach does not have good digestion, frequent noise and frequent burping is created and food stays longer in the stomach or falls before the due date.(28)

And says:

"If there is no swelling (gastritis) and ulcer of the stomach and food is not spoiled, but the food is not digested properly, the reason is dis-temperament that cold and wet is the most and then warm and then dry,".

From these statements, it is elicited that the stomach will have abnormal symptoms following three forms:

1. When there is swelling in the stomach (gastritis).
2. When the stomach is scarring.
3. When the patient food have problem.

Otherwise the three modes, dis-temperament are due to the patient's unusual symptoms of stomach and the most common of them is cold(28). Just in these three cases of gastric disease and only them with clinical symptoms and diagnostic exam are diagnosed and the cause of others are called unexplained illnesses or functional.(1)

From the perspective of traditional medicine 4 energies are responsible for digestion in stomach including attraction, retentive, digestive and repulsion and complete digestion in the stomach and perfect health is dependent on the force.(29) The vulnerability of them caused various diseases.(28, 30)

*Weak attraction of stomach:*

With weak attraction of stomach, food delay through the cardia and its cause is cold and wet in the cardia. Hakim Arzani says: "You know that attraction has helped with warm and dry and weaken with cold and wet, and a sign of his weakness is that the food passes through the orifice of the stomach slowly, and gravity is felt in the chest".(29)

*The weakness of the retentive force:*

The weakness of the retentive force causes that food is not encompass (means the twine and wrapping) by stomach and stomach shake and then whole body is continuing (28, 30) and Hakim Arzani says: "You Know that the dry and cold, caused retentive to strengthen." (29)

*Weak digestive power:*

Weak digestive power of the stomach will create by cool and dry and whenever saying the weakness in the stomach, this only match but all the forces are being cause weakness in the stomach.

Then all dis-temperament can create poor digestion. (29)

Avicenna says "Each of the four forces of stomach becomes weak and the stomach will weaken. But most are accustomed to relegate it to the digestive". (28)

All the powers of stomach will weaken with all dis-temperaments, but the attraction is more often weakened by cold and wet, so warm and dry medications should be used unless another things cause weakness. Retentive tend to be mostly dry and cold, repulsion associated wet with the cold and indigestion with warmth and a little wet can be treated. (28)

*Weak repulsion power:*

Weak repulsion power causes smell of food comes with burping and the sign of weak repulsion is food stay in the stomach longer than 22 hours. (28, 29)

Moderate time (optimum) keep food in the stomach is 12 to 22 hours. (28, 29)

According to Avicenna, these forces weaknesses, which can cause stomach weakness, was identified that are associated with stomach dis-temperament. (28)

*Discussion:*

As indicated in Tables 2 and 3, all symptoms of the stomach disorder are same as what is mentioned in criterion of ROME III for FGID.

**Table 2:**

Signs dis-temperament?	dyspepsia	Weak digestion	Gastric pain	Distension	Belching	nausea	vomiting	Gastric irritation
simple warm dis-temperament	×	×	×					
simple cold dis-temperament	×	×	×	×	×			
simple dry dis-temperament	×	×	×					
simple wet dis-temperament	×	×						
simple warm & wet dis-temperament	×	×	×					
simple warm & dry dis-temperament	×	×	×					
simple cold & wet dis-temperament	×	×	×					
simple cold & dry dis-temperament	×	×	×					
bilious dis-temperament	×	×	×	×	×	×	×	
serous dis-temperament	×	×	×	×	×	×	×	×
atrabilious dis-temperament	×	×	×	×	×	×	×	×

**Table 3:**

Signs of FGID dis-temperament?	Feeling fullness of stomach after eating	Primary anorexia	Epigastric pain	Epigastric irritation (heart burn)	Vomit after eating	Too much belching
simple warm dis-		anorexia	gastric pain			

temperament						
simple cold dis-temperament	distension	anorexia	gastric pain			belching
simple dry dis-temperament			gastric pain			
Simple wet dis-temperament						
Simple warm & wet dis-temperament			gastric pain			
Simple warm & dry dis-temperament			gastric pain			
simple cold & wet dis-temperament			gastric pain			
simple cold & dry dis-temperament			gastric pain			
bilious dis-temperament	distension	anorexia	gastric pain		nausea	belching
serous dis-temperament	distension	anorexia	gastric pain	gastric irritation	nausea	belching
atrabilious dis-temperament	distension		gastric pain	gastric irritation	nausea	belching

Another point is that according to definition of FGID in conventional medicine(1) and what is mentioned in ITM books about stomach dis-temperaments, stomach temperaments and their signs(28) that are not considered in conventional medicine, we can use stomach temperaments and dis-temperaments management for FGID treatment and its pathophysiology explaining.

### Conclusion

With studying and comparing the mentioned signs in the ROME III book about FGID and what is found in ITM books about stomach dis-temperaments, we can discover the important point that conventional medicine has not done pay attention to temperaments and dis-temperaments of the stomach.

Forasmuch as there are some strategies for treating the stomach dis-temperaments in ITM books and also their definitions, we can be found FGID and each subgroups treatments and explaine pathophysiology of them, and then clinical studies conducted to prove this theory.

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