Nowadays, junk foods like burgers, pizzas, and other flour-based meals are more likely consumed by the young generation. Mostly they are unfamiliar with the consequences of the usage, which then may lead to severe and painful irritable bowel conditions. Cramping, bloating, constipation, abdominal pain, gas, and diarrhea are some of the common problems that are to be tackled for the patients of IBS. One must have an eye on the signs and symptoms of IBS to reach to its severe conditions. Have a detailed description of IBS here.

Introduction

Digestion is important to maintaining good health, a small change in human activities like eating habits may result in a chronic disease known as irritable bowel syndrome (IBS). IBS does not have a definitive cause but it can be associated with stress, hormonal changes or eating non-fibrous food. Symptoms of IBS include frequent stomach cramps, constipation, diarrhea or bloating.

This condition may vary from person to person depending upon associations, which can be split into two groups: GI-related and GI-nonrelated. GI-related refers to
dysfunction of the gastrointestinal system, causing IBS symptoms. **GI-nonrelated refers to the external factors** such as chronic fatigue syndrome, somatoform, anxiety, chronic pelvic pain, depression, and temporomandibular joint disorders.

**Definition of IBS**

Irritable bowel syndrome (IBS) is a condition affecting the colon. Other terminologies used for IBS include spastic bowel, nervous colon and spastic colon. It is important to know that there is no observable cellular/anatomic disruption with this condition (i.e. histology would be normal).

**Incidence of IBS**

IBS affects 10 – 15 % of the all adults, more commonly **people below 45 years**. **Women are more commonly affected** compared to men (2:1). 1 out of every 5 individuals are affected with the disease and mostly the age group is 20 to 30 years. The early signs of the IBS should be addressed very promptly to avoid its severe and serious conditions. Managing lifestyle, stress, and diet are few relievers for IBS. Proper counselling and medication will improve IBS conditions.

**Pathophysiology of IBS**

The exact cause behind this chronic disease is still unknown; however, there are certain factors that play a vital role in this disorder, these include internal as well as external factors.

**Internal factors are:**

**Contractions in the intestines**

The intestinal walls are lined with muscles that produce peristalsis, the rhythmic contraction and relaxation which moves food from the stomach towards the intestinal territory to rectum. The patients of IBS have **stronger and longer lasting contractions** then the normal individual, causing gastric problems, bloating, and diarrhea conditions. A weak intestinal contraction causes **dry and hard stools** causing slow passage of food and constipation.

**External factors such environmental, economic, and mental factors can also have a large impact on the IBS.** These include:
Foods

An unhealthy and non-fibrous diet can cause constipation, pain/discomfort, and bloating. Patients with IBS should maintain a diet rich in fiber and nutrients, promoting regular bowel movement and a healthy digestive system.

Mental stress

IBS can be worst under stress conditions, which may be economic stress, work stress or any other mental stress. This is the most commonly associated risk factor. For the purpose of board examinations, the characteristic patient with IBS is a middle-aged female with increased stress (although it is usually a female, do not rule this out if it is a male).

Hormonal changes

It is a witness that women are more susceptible to IBS than men because their bodies undergo more hormonal changes throughout their lives. The IBS symptoms can occur during the menstrual periods and pregnancy.

Other illnesses

Severe diarrhea with infection may produce bacteria in the intestine and lead to many illnesses along-with IBS.

Classification of IBS

IBS is mainly classified based on the consistency of stools. Classification is important, as the medication is given accordingly. The classes of IBS are:

Class I IBS-C (constipation)

Irritable bowel syndrome with constipation is the main type of IBS in which stool must be at least 25 % hard or lumpy and less than 25 % watery and loose.

Class II IBS-D (diarrhea)

Irritable bowel syndrome when occurring with diarrhea, the stool must be at least 25 % loose and watery together with less than 25 % hard and lumpy.

Class III IBS-M (mixed)

In mixed irritable bowel syndrome, the stool must be at least 25 % hard or lumpy along-with loose or watery at the same time. It is mixed constipation and diarrhea condition with IBS.

Class IV IBS-U (unclassified)

Irritable bowel syndrome class that does not fit with any of the other three. In this case, it is difficult to identify the problems as the stools are less than 25 % hard & lumpy as well as less than 25% watery and loose.
Clinical Features of IBS

The symptoms of irritable bowel syndrome may differ from individual to individual and sometimes are miss-match with the other diseases. The symptoms include:

- Bloating feeling
- Nausea
- Diarrhea
- Abdominal pain (which usually decreases after defecation)
- Cramping
- Gas
- Constipation
- Occasionally alternative attacks of diarrhea and constipation
- Mucus in the stool

Investigations and Diagnosis

Irritable bowel syndrome is a diagnosis of exclusion, it depends mainly on physical exam and medical history. There are two criteria of diagnosis for IBS, both depend on symptoms present.

Rome criteria

The patient has abnormal pains that last at least three days a month and are associated with decreased pain with defecation and change in consistency or frequency of stool.

Manning criteria

Patients with defecation-relieved pains, incomplete bowel activities, mucus and alteration in stool evenness. Red flag symptoms and signs that should prompt additional testing include:

- Weight loss
- New onset in patients over 50 years of age
- Fever
- Rectal bleeding
- Vomiting
- Nausea
- Abnormal pain (at night)
- Anemia
- Diarrhea

If a patient has symptoms consistent with IBS and there are no red flags, treatment for IBS can be initiated without additional tests. On the other hand, if signs and symptoms are inconsistent or red flags are present, additional tests should be done; these include:

Imaging

- Flexible sigmoidoscopy: This examination looks at the rectal sigmoid colon.
- Colonoscopy: This test uses an endoscope to examine the entire colon.
- X-ray: Standing and supine abdominal x-rays can be done to check for obstruction or perforation.
- **Computerized tomography:** Abdomen CT scans with and without PO/IV contrast are extremely helpful in diagnosing pathologies causing abdominal pain.
- **Lower GI series:** Radiopaque liquid is ingested/introduced and x-rays are taken over a period of time, helpful in visualizing intestinal movement.

**Laboratory tests**

- **Lactose intolerance tests:** An enzyme, which helps in digesting sugar from dairy products, is called lactose. The absence of lactose can cause problems similar to irritable bowel syndrome.
- **Breath tests:** Can be done to test for presence of certain bacteria in the GI tract.
- **Blood tests:** CBC and metabolic panel.
- **Stool tests:** to look for the presence of parasites or bacteria.
- **Biopsy:** looking for histological changes. IBS patients have **normal** biopsy results.

**Treatment of IBS**

Because there is no definitive etiology, treatment is focused mainly on management of symptoms.

**Dietary changes**

- Increase dietary fiber intake
- Reduce greasy/fatty foods

**Medications**

- **Fibre supplements:** Methylcellulose (Citrucel) and Psyllium (Metamucil)
- **Anti-diarrheal medicine:** Loperamide (Imodium) and bile acid binders
- **Anticholinergic and antispasmodic medications:** Dicyclomine (Bentyl) and Hyoscyamine (Levsin)
- **Antidepressant medications:** Tricyclic antidepressant and serotonin reuptake inhibitor (SSRI)

**Antibiotics**

Are not recommended for patients with IBS.

**Counseling**

Counselling helps if the patient is suffering some stress or depression, which worsen the patient’s symptoms.

**Medication specifically for IBS**

There are two medications approved for IBS:

- **Alosetron (Lotronex):** Serotonin antagonist, which slows GI movement. Used in severe cases of IBS in women only.
- **Lubiprostone (Amitiza):** This medicine increases small intestine fluid secretion to assist with the stool passage. It can only be a recommendation to women older than 17 years-old suffering from IBS with constipation. Adverse effects include diarrhea, abdominal pain, and nausea.

**Review Questions**

The correct answers can be found below the references.

1. **What kind of stool is passed in mixed irritable bowel syndrome?**
   
   1. > 25 % hard & < 25 % loose
   2. > 25 % hard & > 25 % loose
   3. < 25 % hard & > 25 % loose
   4. < 25 % hard & < 25 % loose

2. **What are the classification systems for diagnosing IBS?**
   
   1. Italian and Rome criteria
   2. Italian and managing criteria
   3. French and Rome criteria
   4. Rome and Manning criteria

**References**


Hahn BA, Saunders WB, Maier WC. Differences between individuals with self-reported irritable bowel syndrome (IBS) and IBS-like symptoms. Dig Dis Sci 1997; 42:2585.

**Correct answers:** 1B, 2D

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