

A Case of Irritable Bowel Syndrome in the setting of Generalized Anxiety Disorder

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Case

- **CC:**
23yo F presenting to family medicine for annual checkup
- **PMH:**
Irritable Bowel Syndrome - Mixed (IBS-M) x 8yrs
 - Sx's → constipation + diarrhea, cramping
 - Tx → failed conservative Tx + medical managementGeneralized Anxiety Disorder (GAD) x 6yrs GAD
 - Sx's → nervousness, difficulty concentrating, worrying
 - Tx → Sertraline 75mg PO qd + weekly CBT sessions
- **FHx**
GAD (maternal hx)
- **SHx**
Well balanced diet + adequate fluid intake, avid runner
5-6 alcoholic drinks/wk, denies smoking + illicit drug use
- **PE**
Vitals → WNL
Gen → well appearing, NAD
Psych → AAOx3, normal mood and affect
Heart → RRR without murmurs
Lungs → CTA in all lobes bilaterally
Abdomen → soft, non-tender, non-distended, BS+
- **Labs**
CBC, BMP, Thyroid panel, Lipase all WNL

IBS Overview¹

- Sx's²
 - Abdominal pain
 - Bloating
 - diarrhea
 - Constipation
- Dx → Rome IV Criteria (2 or more)³
 - Increased or improved pain with defecation
 - Change in stool frequency
 - Change in stool form
- Tx → Symptomatic relief +/- lifestyle modifications⁴
 - Prokinetics, antispasmodics, bulk-forming laxatives, anti-diarrheals⁵



Role of Brain-Gut Axis with Concomitant Anxiety

- Anxiety = most common comorbidity seen in IBS patients⁶
 - Stress often an exacerbating factor in IBS episodes⁶
- Neurochemical link - IBS and Anxiety?⁷
 - No GI structural abnormality in IBS patients
- Brain-gut Axis⁸
 - Bidirectional neural pathway between enteric and central nervous systems⁸
 - fMRI → altered cortical functions with gut stimulation in IBS patients⁸

References

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Neurotransmitters

- Serotonin, epinephrine, norepinephrine, dopamine
 - Common to central and enteric nervous systems⁹
- Anxiety → autonomic dysregulation of neurotransmitters⁹
 - 1st line Tx → SSRIs⁹
- Serotonin (5HT) abnormalities in IBS patients⁹
 - Reduced in IBS-C, increased in IBS-D⁹
 - Possible target for long term management

SSRIs and TCAs

- Used to Tx anxiety and other mood disorders¹⁰
 - Shown effectiveness in IBS patients¹⁰
- SSRIs → secretory → side effect of diarrhea¹⁰
- TCAs → anticholinergic → side effect of constipation¹⁰
- Tighter regulation of neurotransmitters may lead to more effective IBS management

Key Points:

- Irritable Bowel Syndrome (IBS) = functional GI characterized by a relapsing-remitting course of abdominal discomfort and change in stool form/frequency in the absence of any structural or biochemical abnormalities.
- Current symptomatic treatment for IBS is often unsuccessful long-term.
- A dysregulated brain-gut interaction leading to serotonin (5-HT) dysregulation in the gut appears to be a commonality among IBS and GAD patients.
- Further research is needed to determine if tighter regulation of 5-HT in IBS patients with GAD could provide better long-term symptomatic improvement.