Functional Gastrointestinal Disorder and Emetophobia Misdiagnosed as Anorexia Nervosa - A Case Report

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Background

Functional Gastrointestinal Disorders (FGIDs) are defined by the Rome IV criteria as "disorders of brain-gut interaction".[1] Symptoms consist of any combination of: gastrointestinal visceral hypersensitivity, altered gut microbiota, motility disturbances, altered mucosal and immune function and altered CNS processing.[1] Emetophobia is a specific phobia characterized by the intense fear of vomiting and is commonly associated with significant changes in eating patterns.[3,4] Emetophobia can be a diagnostic challenge due to its similarities to conditions such as Obsessive Compulsive Disorder (OCD), and co-occurrence of other psychiatric conditions such as anxiety, depression and eating disorders.[4] Serotonin (5HT), as a key neurotransmitter in the brain-gut axis, plays an important role in the pathogenesis of both psychiatric disorders and FGIDs.[5]

Case

A 24 yo Hispanic woman, presented to the hospital with a three year history of progressive food restriction, severe weight loss (38 lbs in three months), BMI of 16.4, and malnutrition. She had dissatisfaction with body image and unexplained episodes of vomiting and/or diarrhea within an hour of eating.

PPHx: OCD, depression and anxiety
PMHx: none per patient
Meds: Sertraline 50 mg QD, Olanzapine 2.5 mg BID; however not compliant for months due to issues with access
Substance use: denied current use or history of tobacco, ETOH, marijuana, or other substances

Additional background: patient revealed she had developed extreme fear of vomiting and was restricting foods she believed would make her vomit. The dissatisfaction with her body image was due to the fact that she was overly thin. Her appetite was normal, and she had a strong desire to eat and gain weight.

Case Continued

Hospital course: GI work up including imaging, serum studies and biopsies which were negative. The patient was diagnosed with FGID (intestinal motility disorder) and received pantoprazole 40 mg qd, ondansetron 4 mg IM PRN, sertraline 50 mg qd, clonazepam 0.25 mg qd, and psychotherapy. She gradually improved, and was discharged after two weeks.

Follow up: A month after discharge the patient had gained 28 lbs, BMI was 20.1, and FGID symptoms had subsided.

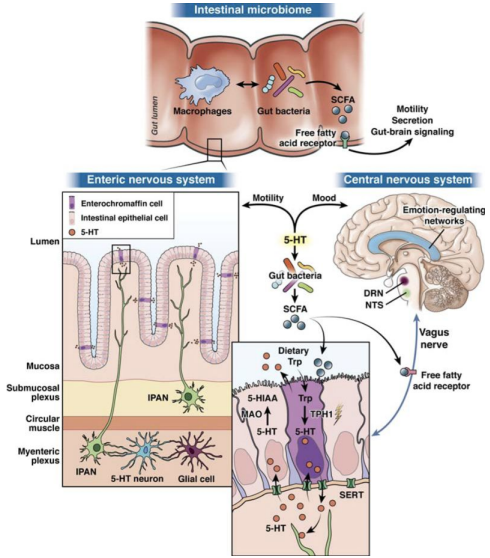

Figure 1: Serotonin as a key player in the brain-gut axis. From Margolis et al. (2021)[5]

Discussion

This is a complex case where FGID led to emetophobia as well as avoidant/restrictive food intake disorder (ARFD). Her pre-existing diagnosis of anxiety likely increased the risk of developing emetophobia and the FGID was likely worsened due to the severe anxiety. Emetophobia is challenging to diagnose due to similarities with other psychiatric conditions like OCD, which can be comorbid. Although misdiagnoses of eating disorders like anorexia nervosa are uncommon, it has occured with other FGIDs. It is also important to note the influence of the brain-gut axis, a bidirectional neurocircuit communication pathway between the gastrointestinal (GI) system and the brain.[5] It plays a crucial role in the regulation of GI physiology and is affected in both FGIDs and psychiatric disorders. In this case, treatment with medication and psychotherapy was successful in improving the emetophobia, FGID and ARFD.

Conclusion/Implications

FGIDs, emetophobia and eating disorders have overlapping symptoms, and can sometimes co-occur. This is largely due to dysregulation in the brain-gut axis. Further research will improve mechanistic insight into these conditions. Careful history taking is essential to an accurate diagnosis, as that has significant implications for treatment.

References

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