

Short Review

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Correlation of gastro-oesophageal reflux disease with psychological factors: A viscous cycle?

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Abstract

Gastroesophageal reflux disease (GERD), a disorder of the gastro-intestinal tract is often associated with psychological factors such as anxiety and depression. Researchers across the globe are divided in their views about psychological factors being the cause or sequelae of GERD. While some researchers believe that psychiatric disorders contribute to GERD, others suggest that unresolved GERD leads to symptoms of anxiety and depression. Through this article we aim to highlight, that the brain-gut axis acts as a strong link between the central nervous system and Gastrointestinal tract and that there is a likelihood of a viscous cycle of psychological factors leading to symptoms of GERD, and unresolved GERD contributing to further worsening of psychological illnesses. In our opinion, while treating patients for either of the two disorders, history of the other one needs to be excluded and if GERD and psychological illnesses are found to co-exist, the two must be treated simultaneously as the treatment of one maybe incomplete without treatment of the other.

Introduction

Gastroesophageal Reflux Disease (GERD) is a disorder of the gastro-intestinal tract which is marked by the reflux of contents of the stomach into esophagus, presenting as heartburn and regurgitation. It can be classified further into three subtypes that include Reflux Esophagitis (RE), Barrett's esophagus and Non-Erosive Reflux Disease (NERD) [1]. Several causes of GERD have been identified. It is seen to result due to an interplay of factors such as the harmful properties of refluxed stomach contents, failure of the of esophageal clearance mechanism, and decreased resistance of the esophageal mucosa [2]. It has been reported that in addition to the above mentioned factors, psychological factors, such as anxiety and depression, are seen to be co-existent in patients with GERD [1]. While some researchers believe that anxiety and depression are seen to develop as a consequence of persistent reflux symptoms, [1] others believe that the severity of reflux is more in patients with psychiatric

disorders [3]. In our opinion, psychiatric disorders including anxiety and depression could be the cause as well as effect of Gastro-esophageal reflux disease. Our experience put together with a detailed literature search on co-relation of psychiatric disorders with GERD helped us understand that while psychiatric disorders could contribute to GERD, the vice-versa is also true, thereby establishing a viscous circle.

The brain-gut axis

In order to understand the correlation of psychiatric disorders with GERD, it is important to understand the brain-gut axis. The brain-gut axis explains the close link of brain with the gastro-intestinal tract. The brain-gut axis represents the two way movement of signals between the central nervous system and gastrointestinal symptoms. It plays an important role in the smooth functioning of digestive processes such as Gastrointestinal (GI) peristalsis, release of enzymatic secretions, digestion, assimilation, and blood flow. In addition to these, it has an im-

munomodulatory role with respect to the mucosa of the gut and is responsible for maintaining appetite and metabolism. On the other hand, the central nervous system receives input (i.e. stimulus) from the digestive tract. The brain integrates this information with signals received from other systems, and transmits integrated feedback back to the end organs of the GI tract [4].

Psychological factors and GERD

It is believed that psychiatric disorders such as anxiety could lead to release of certain chemicals or hormones which upon acting on the mucosa of the gut, could disturb its microbiota and result in gastro-intestinal manifestations. Anxiety and depression being a cause of GERD is explained by the fact that psychological factors can impact the perception of pain via acting on the gut brain axis [5].

Moreover there is enough evidence to suggest that it that anxiety and depression levels were found to be significantly higher in subjects with GERD. The same study also suggested that symptoms of reflux eventually led to aggravate anxiety and depression [7], thereby forming a viscous cycle.

Additionally, when psychological factors accompany this condition, the treatment of the functional gastrointestinal disorder becomes difficult, which contributes to poor outcomes [7].

While the brain-gut axis explains the link of the central nervous system with the gastro-intestinal symptoms, in our opinion, anxiety and depression could lead to alteration in the gut flora, thereby triggering gastro-intestinal symptoms which if un-resolved can contribute to further anxiety and worsening of psychological symptoms, thus explaining the viscous cycle.

Conclusion

Our experience put together with evidence from existing literature suggests that there is a definite role of psychological factors in causing, worsening and treatment of GERD and vice versa. In our opinion, while treating cases of GERD with coexistent anxiety or depression, the treatment of gastrointestinal symptoms should go alongside with the treatment of psychological factors. Psychological factors could be the cause as well as sequelae of GERD. History taking is extremely important in such patients and the history of GERD must be ruled out in all patients of psychiatric disorders. On the other hand evaluation of a case of GERD must include taking history of psychiatric illnesses from patients. We believe that the viscous cycle of psychological disorders leading to GERD and unresolved gastro-intestinal symptoms worsening conditions like anxiety and depression can be broken by evaluating and treating both disorders simultaneously. The administration of probiotics to restore healthy gut flora and role of psychological counseling cannot be undermined in treatment of psychological disorders.

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