

CHALLENGES AND STRATEGIES FOR MANAGING GERD DISEASE IN ADOLESCENTS

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Abstract

Gastroesophageal Reflux Disease (GERD) is a health problem that is increasing in prevalence throughout the world. The aim of this research is to evaluate the challenges and strategies for managing GERD through a literature study. This research method involves searching and analyzing various sources of information relevant to the topic of GERD disease management. Selection of information sources is carried out based on predetermined inclusion and exclusion criteria, including relevance to the topic, year of publication, and methodological quality. This research is a type of qualitative research in the nature of a literature study (Library Search) which uses literature as the main research object. Data obtained from literature studies were then analyzed systematically to identify patterns, trends and main findings related to challenges and strategies for managing GERD. The research results show that the main challenges in managing GERD include the diversity of symptoms, risk factors such as unhealthy eating patterns and smoking habits, as well as the side effects of long-term medical treatment. Effective management strategies include a combination of medical treatment with healthy lifestyle changes and cognitive behavioral therapy. This holistic approach not only helps reduce GERD symptoms, but also prevents long-term complications such as esophagitis and esophageal cancer. By paying attention to the challenges faced and implementing appropriate management strategies, it is hoped that we can improve the quality of life of GERD patients and reduce the overall disease burden on the health system. This research provides a better understanding of the management of GERD and provides a basis for the development of more optimal approaches to managing this disease.

Keywords: Challenges, GERD, Management, Strategy

Introduction

Gastroesophageal Reflux Disease (GERD) is a health problem that is increasing in prevalence throughout the world. GERD occurs when stomach contents rise into the esophagus, causing symptoms such as chest pain, burning sensation in the chest, and regurgitation. The main challenge in managing this disease is managing the symptoms that can interfere with an individual's quality of life as well as preventing long-term complications such as esophagitis, ulcers, and even esophageal cancer. In managing GERD, a comprehensive and strategic approach is needed.

There are several factors that become challenges in managing GERD. First, the variation in symptoms between individuals makes diagnosis and treatment complex. Apart from that, lifestyle factors such as unhealthy eating patterns, alcohol consumption, smoking, and obesity can also worsen GERD conditions. This demands management strategies that focus not only on medical treatment, but also lifestyle changes.

Prevention has a very important role in the management of GERD. Avoiding risk factors such as spicy, fatty and acidic foods and paying attention to a healthy diet can help reduce GERD symptoms. In addition, avoiding foods or drinks that can trigger acid reflux such as coffee, chocolate, caffeinated drinks, and alcoholic drinks can also help reduce the severity of symptoms.

To overcome the complexity of GERD, an integrated management strategy is needed. This includes a combination of medical treatment, lifestyle changes, and holistic approaches such as cognitive behavioral therapy. Use of antireflux medications such as proton pump inhibitors (PPIs) or antacids can help control stomach acid production and relieve symptoms. Meanwhile, holistic approaches such as diet therapy, stress management and physical exercise also have an important role in the long-term management of this disease.

This study aims to evaluate the effectiveness of various GERD management strategies in reducing symptoms and preventing long-term complications. Implementation of a comprehensive management strategy is expected to improve the quality of life of individuals suffering from GERD and reduce the overall disease burden on the health system. With a better understanding of the challenges faced in managing GERD and effective strategies for overcoming them, it is hoped that a more optimal approach to managing this disease can be created.

Method

This research method is based on a literature study which involves searching and analyzing various sources of information relevant to the topic of GERD disease management. Literature searches were carried out through scientific databases such as *PubMed*, *Google Scholar*, and other leading medical journals using keywords appropriate to the research objectives. Selection of information sources is carried out based on predetermined inclusion and exclusion criteria, including relevance to the topic, year of publication, and methodological quality. Data obtained from literature studies were then analyzed systematically to identify patterns, trends and main findings related to challenges and strategies for managing GERD.

The analysis was carried out by taking into account aspects such as the effectiveness of therapy, lifestyle changes, and risk factors related to symptoms and complications of the disease. The results of this analysis are then used to develop recommendations and conclusions which can be the basis for developing more effective management strategies in treating GERD. This method provides a comprehensive understanding of the current situation in the management of GERD disease and allows the identification of recent trends and innovations in treatment and care.

Results and Discussion

A study of the literature on the challenges and strategies for managing *Gastroesophageal Reflux Disease* (GERD) revealed a number of important findings that may help improve understanding and approaches to managing this condition. Various factors have been identified as challenges in the management of GERD, including variability in symptoms between individuals, unhealthy eating patterns, alcohol consumption and smoking, and obesity. On the other hand, there are a variety of management strategies that have been researched and implemented, including medical treatment with proton pump inhibitors (PPIs) and antacids, lifestyle changes such as a healthy diet and stress management, and cognitive behavioral therapy.

A holistic approach to GERD management also includes cognitive behavioral therapy. One cognitive behavioral technique is cognitive restructuring. Cognitive restructuring is a technique commonly used to reverse cognitive distortions or fundamental "thinking errors" with the goal of replacing irrational thoughts and reducing negative thoughts. The goal of this therapy is to change

thought patterns and behaviors that may be contributing to GERD symptoms, such as poor eating habits or excessive anxiety related to the condition. Research shows that cognitive behavioral therapy is effective in reducing GERD symptoms and improving quality of life.

One specific type of cognitive behavioral therapy is cognitive behavioral therapy with mindfulness. The therapy itself is designed to target cognitive processes that may be repetitive, such as rumination and cognitive responses to mood changes (Teasdale et al., 2000). Cognitive Therapy - Behavioral Mindfulness combines the concepts of mindfulness with CBT. The main principle is to divert attention from negative responses and rumination (Williams et al., 2011). This emerging thought cycle is related to the symptoms of health anxiety.

While medical treatments such as PPIs and antacids have become standard in the management of GERD, research has also highlighted the importance of a holistic approach that includes lifestyle changes and behavioral therapy. Integrated management strategies that combine medical treatment with lifestyle changes have been shown to be effective in reducing symptoms and improving quality of life for GERD patients. In addition, this approach also helps prevent long-term complications such as esophagitis and esophageal cancer.

Such a diet has been proven to be a factor in the incidence of GERD because poor diet or irregular eating patterns are closely related to GERD. Reflux symptoms occur due to gastric distension after eating, generally between 2-3 hours after eating. The habit of sleeping within an hour after eating is related to GERD because it can reduce LES pressure in the supine position. Several studies show that the relationship between diet and the occurrence of GERD is still controversial. In Iran, this is not common in adults. There is an unknown relationship between diet and risk, but this relationship is relatively harmless. Regarding fast food (Khodarahmi et al., 2016). Research in Japan reported that eating at night is common. Skipping breakfast and being late has nothing to do with it. with GERD, while another study found that up to 8% of patients experienced heartburn after consuming peppermint (Ajjah et al., 2020).

Consumption of acidic foods/drinks with low pH or spicy foods containing capsaicin which can stimulate mechanoreceptors in the esophagus, causing unpleasant symptoms, especially if there are lesions on the esophageal mucous membrane (El-Srag et al., 2014). Consumption of large amounts of food can affect reflux frequency by increasing gastric distension, increasing Transient Lower Esophageal Sphincter Relaxation (TLESR) and delaying gastric emptying.

Very spicy foods can stimulate increased gastrin production which triggers stomach acid production. High stomach acid can trigger inflammation and damage the stomach lining, causing dyspepsia. The active component in spicy foods such as chilies, known as capsaicin, has a dual effect. First, capsaicin activates C-afferent fibers, which improves symptoms, followed by desensitization, which reduces symptoms. However, consuming too much spicy food can have a bad impact on the digestive system (Wibawani et al., 2021).

Capsaicin may affect gastric emptying by altering gastrointestinal hormone secretion. The capsaicin receptor, known as TRPV1, is abundant in the stomach, especially during gastric irritation. Acute capsaicin infusion increases sensitivity to stress-induced secondary peristaltic movements and facilitates secondary peristaltic contractions. Sensory afferent fibers that respond to capsaicin are also involved in the regulation of secondary peristalsis caused by esophageal distension (Williams et al., 2016).

First of all, it is important to understand the diversity of symptoms experienced by individuals with GERD. The main symptoms of GERD include chest pain, heartburn, regurgitation, and sleep disturbances. However, not all patients experience the same symptoms, and the severity of symptoms can vary from mild to severe. This shows the need for an individualized approach in the management of GERD, where treatment must be tailored to the needs and characteristics of each patient.

Apart from symptoms, risk factors also play an important role in the management of GERD. Unhealthy eating patterns, including consuming spicy, fatty and acidic foods, can trigger acid reflux and worsen GERD symptoms. Likewise, alcohol consumption, smoking and being overweight can increase pressure on the stomach and increase the risk of acid reflux. Therefore, it is important to identify and address these risk factors as part of a GERD management strategy.

Medical treatment remains the main pillar in the management of GERD. Proton pump inhibitors (PPI) are the most commonly used drugs to reduce stomach acid production and relieve GERD symptoms. PPIs are effective in controlling symptoms and preventing esophageal damage due to acid reflux. However, long-term use of PPIs can also have side effects, such as decreased absorption of certain nutrients and increased risk of upper respiratory tract infections. Therefore, it is important to consider the long-term benefits and risks of PPI use.

Apart from medical treatment, lifestyle changes also have a significant role in the management of GERD. A healthy diet that avoids foods and drinks that can trigger acid reflux, such as spicy, fatty and alcoholic foods, can help reduce GERD symptoms. Stress greatly influences the effects of GERD, because stress reduces body productivity and changes the body's metabolic balance, especially in the digestive organs, thereby increasing stomach acid production, thus triggering a recurrence of GERD. .

A holistic approach to managing GERD also includes cognitive behavioral therapy. This therapy aims to change thought patterns and behavior that can influence GERD symptoms, such as poor eating habits or excessive anxiety related to the condition. Studies have shown that cognitive behavioral therapy can be effective in reducing GERD symptoms and improving patients' quality of life.

In the context of GERD management, it is important to adopt an integrated approach that combines medical treatment, lifestyle changes, and behavioral therapy. This approach allows comprehensive treatment and individualization according to the needs of each patient. By understanding the challenges faced in managing GERD and implementing effective strategies, it is hoped that we can improve the quality of life of patients and prevent long-term complications of this disease.

Conclusion

Gastroesophageal Reflux Disease (GERD) is a health problem that is increasing in prevalence throughout the world. GERD occurs when stomach contents rise into the esophagus, causing symptoms such as chest pain, burning sensation in the chest, and regurgitation. Management of *Gastroesophageal Reflux Disease* (GERD) requires a comprehensive and integrated approach. The main challenges in managing GERD include the diversity of symptoms, risk factors such as unhealthy diet and smoking habits, and the side effects of long-term medical treatment. Effective management strategies include a combination of medical treatment with healthy lifestyle changes and cognitive behavioral therapy. This holistic approach not only helps reduce GERD symptoms, but also prevents long-term complications such as esophagitis and esophageal cancer. By paying attention to the challenges faced and implementing appropriate management strategies, it is hoped that we can improve the quality of life of GERD patients and reduce the overall disease burden on the health system.

References

- [1] Ajjah, B., F., Mamfaluti, T., Putra, T, R., I. (2020). The Relationship Between Diet and the Occurrence of Gastroesophageal Reflux Disease (GERD). *College Journal of Nutrition*. 9(3). 169-179
- [2] El-Serag, H.B., Sweet, S., Winchester, C.C., & Dent, J. (2014). Gastro-esophageal reflux disease epidemiology update: a systematic review. *Gut*, 63(6), 871-880.
- [3] Gyawali, C., P., et al. (2018). Modern diagnosis of GERD: Lyon Consensus. *Gut*, 67(7), 1351-1362.
- [4] Hershcovici, T., & Fass, R. (2011). Pharmacological management of GERD: where does it stand now?. *Trends in pharmacology*, 32(4), 258-264.
- [5] Katz, P., O., et al. (2013). Guidelines for the diagnosis and management of gastroesophageal reflux disease. *The official journal of the American College of Gastroenterology| ACG*, 108(3), 308-328.
- [6] Khodarahmi M, Azadbakht L, Daghighzadeh H, Feinle-Bisset C, Keshteli AH, Afshar H, et al. Evaluation of the relationship between major dietary patterns and uninvestigated reflux among Iranian adults. *Nutrition*. 2016;32(5):573–83.
- [7] Pandolfino, J.E., & Kahrilas, P.J. (2005). AGA technical review of the clinical use of esophageal manometry. *Gastroenterology*, 128(1), 209-224.
- [8] Richter, J. E., & Rubenstein, J. H. (2018). Presentation and epidemiology of gastroesophageal reflux disease. *Gastroenterology*, 154(2), 267-276.
- [9] Wibawani, E. A., Faturahman, Y., & Purwanto, A. (2021). Factors Associated with the Incident of Dyspepsia in Internal Medicine Outpatients at Koja Regional Hospital (Study of Internal Medicine Outpatients at Koja Regional Hospital in 2020). *Indonesian Community Health Journal*.17(1):257-266.
- [10] Williams, E. K., Chang, R. B., Strochlic, D. E., Umans, B. D., Lowell, B. B., & Liberles, S. D. (2016). Sensory neurons that detect stretch and nutrients in the digestive system. *Cell*. 166(1): 209-221.