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Gastroesophageal reflux disease (GERD) in childhood phobic anxiety disorder: Case report

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Abstract---*About 50% of gastroesophageal reflux disease (GERD) patients are symptomatic and affected by psychosocial factors. Anxiety can cause GERD through the brain-gut-axis mechanism. A female patient, aged 6 years, was consulted by the Psychiatry Department with complaints of fear. The patient said she was afraid to go to the doctor for fear of tooth extraction. The patient said she had been hospitalized several times because of nausea and vomiting. The patient did not dare to eat for fear that her teeth would hurt again. About 4 months ago the patient was hit by a swing in kindergarten which caused her gums to swell, bleed, and her front teeth were loose and broken. Then the patient was invited to the dentist at the public health centre. The patient's mother said that at that time the patient was scared when her teeth were extracted and it was still bleeding. The patient ran out of the dentist's office and cried. After being forced by her mother, the patient eventually resumed treatment. Then when she got home the patient did not want to eat or drink. Then a few days after that the patient had nausea and vomiting. The patient was treated 3 times at the hospital because of complaints of nausea and vomiting. The patient was diagnosed with Childhood Phobic Anxiety Disorder (F93.1). Patients were given non-medical therapy in the form of psychoeducation and pharmacotherapy in the form of 0.1-milligram risperidone and vitamins B6 and B12.*
Keywords---*anxiety disorder, anxiety, childhood phobic, children, GERD.*

Introduction

GERD is a symptom or damage to the esophageal mucosa due to gastric contents entering the esophagus. According to the Montreal classification, GERD is a state of reflux of stomach contents into the esophagus which will cause very disturbing symptoms, with or without complications (Vakil, 2008). The Asia Pacific consensus states that GERD can cause disturbing symptoms or complications which indicate a disturbance in the patient's quality of life. Anxiety is a response to a threatening situation. Anxiety is thought to cause GERD. Many studies state that anxiety can cause dyspepsia, but no research explains the relationship between anxiety and GERD (LaMontagne et al., 2001; Birmaher et al., 1999). Factors that play a role in the emergence of GERD are gastric abnormalities, one of which is slow gastric emptying. The prevalence of GERD in Asia including Indonesia was lower with a percentage of 5% in 1997, but the latest data shows an increase of up to 13.13% per year due to lifestyle changes, such as smoking and obesity (Talley & Holtmann, 2008).

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About 50% of GERD patients are symptomatic and affected by psychosocial factors. Anxiety disorders are experienced 2-4 per life (Dadang, 2011). In the United States, 40 million people experience anxiety from the age of 18 to old age (National Institute of Mental Health), while in Indonesia, of the 22 million Indonesian population, 2-6 million people experience anxiety. Early adulthood (17-25 years) experiences more anxiety than late adulthood (26-35 years) (Syam et al., 2013).

Anxiety can cause GERD through the brain-gut-axis mechanism. The existence of psychological stimulation or stressors will affect the balance of the autonomic nervous system. Increased cortisol from the adrenal cortex originating from stimulation of the cerebral cortex will stimulate the production of stomach acid. In a state of increased stomach acid, it causes stomach contents are pushed into the esophagus. If the esophageal sphincter is relaxed, stomach contents will enter the pharynx, nasopharynx and mouth. This interaction is suspected as the cause of GERD (Chu, 2020). This case report will discuss more deeply GERD in children diagnosed with childhood phobic anxiety disorder (Powers & Emmelkamp, 2008; Warren et al., 1997).

Case Reports

A female patient, AAM, 6 years old, was consulted by the Psychiatry Department with complaints of fear. Patients were interviewed in a position facing the examiner at the Prof Ngoerah Central General Hospital (RSUP) psychiatry polyclinic. The patient was interviewed in a sitting position and appeared to be wearing a black striped shirt and short jeans. The patient has a thin stature and an anxious and scared expression on her face, her fingernails and toenails look well groomed, and there is no unpleasant odour coming from the patient's body. During the patient interview, the patient looked down more and answered the questions asked by the examiner slowly and softly. The patient can correctly state their name, current age, where they are, the time of examination and who is accompanying them at this time. The patients say she was afraid to go to the doctor. The patient is afraid of tooth extraction.

The patient can tell that he is afraid of going to the hospital, afraid of having her teeth pulled. The patient said she had been hospitalized several times because of nausea and vomiting. The patient did not dare to eat for fear that her teeth would hurt again. The patient doesn't talk much, when she is about to tell something, the patient always turns to her mother. The patient seems to show a face of fear and discomfort. The patient also said that she did not want to go to school, because her friends are mocking her. Patients often come home crying and tell their parents. During the interview, the patient slowly finished the bread she brought. Finally, the interview was transferred to the patient's parents.

The patient's father and mother explain how the patient's journey is chronological. About 4 months ago the patient was hit by a swing in kindergarten which caused her gums to swell, bleed, and her front teeth were loose and broken. Then the patient was invited to the dentist at the public health centre. The patient's mother said that at that time the patient was scared when her teeth were extracted and it was still bleeding. The patient ran out of the dentist's office and cried.

After being forced by her mother, the patient finally continued her treatment. Then when she got home the patient did not want to eat or drink. Then a few days after that the patient had nausea and vomiting. The patient's parents then took him to the Army Hospital. The patient was hospitalized for 3 days, after returning home 2 weeks later the patient had nausea and vomiting again and was brought back to the Army Hospital. The patient was treated 3 times at the Army Hospital. During the third hospitalization, the doctor said there seemed to be another problem with the patient because she was not focused when spoken to.

Then the patient's father showed a photo of the patient to the psychiatrist at the Army Hospital and he said that the patient looked depressed and needed further treatment. The patient's parents also decided to bring the patient to Prof dr. IGNG Ngoerah. The patient was treated for 5 days and then consulted by a paediatrician to a psychiatrist.

The patient's mother said that before she got sick, the patient was a creative child. Regarding parenting, the patient's father said that the patient was often scolded by her mother, her mother was strict and firm while her father liked to pamper patients. When her parents fight, the patient often gets angry and tells her parents to stop fighting. The patient's family just moved house about 2 months ago and the current home environment is more comfortable and cleaner.

The history of other diseases was denied by the patient's mother. None of the patient's family had ever experienced similar complaints. History of systemic diseases such as hypertension and Diabetes Mellitus was also denied. Patients usually play with their peers, coincidentally several friends of the same age live in the same boarding house with the patient.

On physical examination, present status and general status were found to be within normal limits. Nutritional status obtained by severe Protein Energy Malnutrition (PEM). On examination of the psychiatric status, the general

impression was that the appearance was reasonable, looked gloomy, and lacked verbal and visual contact. Relations with the examiner can be established, at the beginning of the interview seemed afraid of the examiner. Clear consciousness, anxious/anxious/harmonious mood and affect. The process of logical thinking is realistic/coherent/preoccupied with falling teeth. Visual and auditory hallucinations are absent, depersonalization is absent, and illusions are absent. Instinctive urges, insomnia and hypobulia are absent, raptus is absent. Psychomotor calm, age-appropriate impression intelligence. Repression defence mechanism, acting out. Examination based on Spense showed anxious results (Gallagher et al., 2004; Yeganeh et al., 2003).

The patient's diagnosis according to the Guidelines for Classification and Diagnosis of Indonesian Mental Disorders III (PPDGJ-III), namely Axis I is Childhood Phobic Anxiety Disorder (F93.1). Axis II is quiet nature, shy but afraid of mother, Ego Defence mechanism: repression, acting out. Axis III is GERD + PEM Severe Marasmus Type Condition III Stabilization Phase. Axis IV is a problem with the primary support group, and on Axis V with GAF at check 60-51 and GAF One Year last 90-81.

Patients are given non-medical therapy in the form of psychoeducation to parents about the disorder they are experiencing, the cause of the disorder, therapy, and the prognosis. Medical therapy given by Psychiatry is risperidone 0.1 milligram and Vitamins B6 and B12.

Discussion

The female patient, AMM, aged 6 years, is an outpatient at the Psychiatric Polyclinic at Prof Dr. IGNG Ngoerah a consultant from TS Pediatrics with a diagnosis of GERD and severe PEM with an endoscopy plan. Initially, the patient was hit by a swing 4 months ago, which caused her gums to swell, and bleed and her front teeth were broken and loose. The patient was invited to the dentist at the public health centre. The patient was scared and ran away with bleeding gums after tooth extraction and was forced back by her mother.

The patient did not want to eat and drink, and experienced nausea and vomiting so he was hospitalized 3 times at the Army Hospital before being taken to Prof Ngoerah Hospital. Previously, the patient was often scolded by her mother and was afraid of her mother. None of the patient's family had ever experienced a similar condition. On physical examination, present status and general status were found to be within normal limits. Nutritional status obtained by severe PEM. The psychiatric status obtained a general impression of looking anxious, lacking visual and verbal contact, clear consciousness. Mood/affect: anxious/appropriate. Form of thought: logical realist, the flow of thought: coherent, content of thought: preoccupation with falling teeth due to being hit by a swing. Perception: no hallucinations, no illusions, no derealization, no depersonalization. Instinctual drive: no hypobulia, no insomnia, no raptus. Psychomotor calm during the examination and insight 6. The nutritional status of severe PEM and generalist status are within normal limits. Self-defence mechanisms of repression and acting out. Examination based on Spense showed anxious results.

The patient was diagnosed with Childhood Phobic Anxiety Disorder (F93.1) and requires attention or therapy according to PPDGJ-III and DSM-5. Phobic anxiety disorder in childhood is a typical fear arising at a specific developmental phase in children (Black et al., 2003; Mishna et al., 2009). This category meets the criteria (Indonesian Ministry of Health, 1993):

a) Onset at an appropriate developmental age
b) The level of anxiety is clinically abnormal
c) Anxiety is not part of a comprehensive disorder.

Patients complain of nausea, vomiting and fear and anxiety about their condition. Tooth loss due to being hit by swings traumatizes the patient and does not dare to eat for fear that her teeth will hurt. Nausea and vomiting cause patients to worry and suffer from GERD (Vaezi et al., 2003; Carter et al., 2011).

Anxiety is a subjective experience of disturbing mental tension as a form of general reaction and the inability to deal with problems or the emergence of insecurity in individuals. Anxiety arises because there is fear of something that threatens someone, and there is no ability to know the cause of this anxiety (Ivada et al., 2022).

Anxiety can cause GERD through the brain-gut-axis mechanism. The existence of psychological stimulation or stressors will affect the balance of the autonomic nervous system. Increased cortisol from the adrenal cortex originating from stimulation of the cerebral cortex will stimulate the production of stomach acid. In a state of increased stomach acid, it causes stomach contents are pushed into the esophagus. If the esophageal sphincter is relaxed, stomach contents will enter the pharynx, nasopharynx and mouth. This interaction is suspected as the cause of GERD (Chu, 2020).

Patients are given non-medical therapy in the form of psychoeducation to parents about the disorder they are experiencing, the cause of the disorder, therapy, and the prognosis. The medical therapy given is risperidone 0.1 milligram and Vitamins B6 and B12.

Conclusion

Anxiety can cause GERD through the brain-gut-axis mechanism. The existence of psychological stimulation or stressors will affect the balance of the autonomic nervous system. The pediatric patient in this case complained of nausea and vomiting and was afraid and worried about her condition. The patient's teeth fell out due to being hit by a swing, traumatizing the patient and he did not dare to eat for fear that her teeth would hurt. Patients are given non-medical therapy in the form of psychoeducation and pharmacotherapy in the form of risperidone 0.1 milligrams and Vitamins B6 and B12.

References

Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): a replication study. *Journal of the American academy of child & adolescent psychiatry*, *38*(10), 1230-1236. https://doi.org/10.1097/00004583-199910000-00011

Black, R. E., Morris, S. S., & Bryce, J. (2003). Where and why are 10 million children dying every year?. *The lancet*, *361*(9376), 2226-2234. https://doi.org/10.1016/S0140-6736(03)13779-8

Carter, P. R., LeBlanc, K. A., Hausmann, M. G., Kleinpeter, K. P., deBarros, S. N., & Jones, S. M. (2011). Association between gastroesophageal reflux disease and laparoscopic sleeve gastrectomy. *Surgery for obesity and related diseases*, *7*(5), 569-572. https://doi.org/10.1016/j.soard.2011.01.040

Chu A. (2020). Esophagitis [Internet]. Emedicine.

Dadang, H. (2011). Manajemen stres cemas dan depresi. *Jakarta: Balai Penerbit FKUI*.

Gallagher, H. M., Rabian, B. A., & McCloskey, M. S. (2004). A brief group cognitive-behavioral intervention for social phobia in childhood. *Journal of anxiety disorders*, *18*(4), 459-479. https://doi.org/10.1016/S0887-6185(03)00027-6

Indonesian Ministry of Health (1993). Guidelines for the Classification and Diagnosis of Mental Disorders in Indonesia (PPDGJ) III. III. Directorate General of Medical Services Ministry of Health., editor. Department of Health.

Ivada, P. F., Ardani, I. G. A. I., Lesmana, C. B. J., Windiani, I. G. A. T., Adnyana, I. G. A. N. S., & Fithriyah, I. (2022). Quality of life of pediatric patients experiencing organic depressive disorder with Juvenile Idiopathic Arthritis: Case report. *International Journal of Health & Medical Sciences*, *5*(4), 313-317. https://doi.org/10.21744/ijhms.v5n4.1994

LaMontagne, L. L., Hepworth, J. T., & Salisbury, M. H. (2001). Anxiety and postoperative pain in children who undergo major orthopedic surgery. *Applied Nursing Research*, *14*(3), 119-124. https://doi.org/10.1053/apnr.2001.24410

Mishna, F., Saini, M., & Solomon, S. (2009). Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review*, *31*(12), 1222-1228. https://doi.org/10.1016/j.childyouth.2009.05.004

NIH (National Institute of Mental Health) Senior Health. Anxiety Disorders: Risk Factors and Diagnosis. http://nihseniorhealth.gov/anxietydisorders /riskfactorsandcauses/01.html.

Powers, M. B., & Emmelkamp, P. M. (2008). Virtual reality exposure therapy for anxiety disorders: A meta-analysis. *Journal of anxiety disorders*, *22*(3), 561-569. https://doi.org/10.1016/j.janxdis.2007.04.006

Syam A., Aulia C., Renaldi K., Simadibrata M., Abdullah M., Tedjasaputra T. (2013). Revision of the National Consensus on Management of Gastroesophageal Reflux Disease (GERD) in Indonesia.

Talley, N. J., & Holtmann, G. (2008). Approach to the patient with dyspepsia and related functional gastrointestinal complaints. *Principles of Clinical Gastroenterology*, 38-61.

Vaezi, M. F., Hicks, D. M., Abelson, T. I., & Richter, J. E. (2003). Laryngeal signs and symptoms and gastroesophageal reflux disease (GERD): a critical assessment of cause and effect association. *Clinical Gastroenterology and Hepatology*, *1*(5), 333-344. https://doi.org/10.1053/S1542-3565(03)00177-0

Vakil. (2008). Guidelines for the Management of Dyspepsia. *Am J Gastroenterol*.100:2325–2337.

Warren, S. L., Huston, L., Egeland, B., & Sroufe, L. A. (1997). Child and adolescent anxiety disorders and early attachment. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(5), 637-644. https://doi.org/10.1097/00004583-199705000-00014

Yeganeh, R., Beidel, D. C., Turner, S. M., Pina, A. A., & Silverman, W. K. (2003). Clinical distinctions between selective mutism and social phobia: an investigation of childhood psychopathology. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(9), 1069-1075. https://doi.org/10.1097/01.CHI.0000070262.24125.23