

F Arshad¹, N Wazir¹, E Ahmad²

1. Department of Diabetes and Endocrine, Doncaster Royal Infirmary, Doncaster and Bassetlaw NHS Trust, UK

2. Tunbridge Wells Hospital, Maidstone and Tunbridge Wells NHS Trust, UK.

Introduction

- Hyperthyroidism is associated with multiple gastrointestinal (GI) symptoms.
- Vomiting is not a common GI manifestation of Thyrotoxicosis.
- We present a case of a patient with severe vomiting who was found to be thyrotoxic and whose vomiting was only controlled after controlling her thyroid functions.

Case Report

- A 61-year-old female patient was admitted under surgeons with persistent and severe vomiting which was very difficult to manage.
- No acute surgical cause for vomiting was found and the patient was referred for a Esophagogastroduodenoscopy(OGD) which was normal (Fig. 1).
- Her past history was significant for Grave's disease which was in remission for last 20 years.
- On checking her thyroid function tests, she was grossly thyrotoxic with fully suppressed TSH (<0.01mU/L) and free T4 of 49.2 pmol/L (9-19).
- Her anti-TSH receptor antibodies were positive.
- She was started on carbimazole and beta blockers.
- Controlling her thyroid functions with oral anti-thyroid medications was challenging due to severe and persistent vomiting and she required multiple antiemetic drugs with syringe driver.
- The vomiting stopped immediately, as soon as her free T4 levels were normalized, and she was discharged with endocrine follow-up.

Discussion

- Hyperthyroidism is frequently associated with GI symptoms such as diarrhea, hyperphagia and frequent defecation.¹
- However, vomiting as a GI symptom of thyrotoxicosis, is less commonly reported²⁻⁶ in literature.
- The possible underlying mechanisms that have been postulated for thyrotoxic vomiting are, an increased beta adrenergic activity due to an increased number of beta adrenergic receptors⁷, decreased gastric emptying secondary to the malfunction of the pyloric sphincter⁸, and an increase in estrogen levels.^{2,6}
- Lack of awareness about the association between vomiting and hyperthyroidism might mislead clinicians to an alternate diagnosis and cause a marked delay in the diagnosis; 7 years in one case report.⁹
- Therefore, the possibility of hyperthyroidism should be considered in cases of refractory unexplained vomiting, especially when there is past history of thyroid dysfunction.



Figure 1. Esophagogastroduodenoscopy images of the patient

References

1. Ebert EC. The thyroid and the gut. *J Clin Gastroenterol.* 2010;44:402–406.
2. Rosenthal FD, Jones C, Lewis SI. Thyrotoxic vomiting. *Br Med J.* 1976;2:209–211.
3. Harper MB. Vomiting, nausea, and abdominal pain: unrecognized symptoms of thyrotoxicosis. *J Fam Pract.* 1989;29:382–386.
4. Hoogendoorn EH, Cools BM. Hyperthyrotoxicosis as a cause of persistent vomiting. *Neth J Med.* 2004;62:293–296.
5. Parkin AJ, Nisbet AP, Bishop N. Vomiting due to gastric stasis as the presenting feature in thyrotoxicosis. *Postgrad Med J.* 1981;57:405.
6. Wang KW, Mui KS. Thyrotoxic hyperemesis: a case report. *Singapore Med J.* 1989;30:493–494.
7. Bilezikian JP, Loeb JN. The influence of hyperthyroidism and hypothyroidism on α - and β -adrenergic receptor systems and adrenergic responsiveness. *Endocr Rev* 1983;4:378-388.
8. Parkin AJ, Nisbet AP, Bishop N. Vomiting due to gastric stasis as the presenting feature in thyrotoxicosis. *Postgrad Med J* 1981;57: 405.
9. L. Y. Chen, B. Zhou, Z. W. Chen, and L. Z. Fang, "Recurrent severe vomiting due to hyperthyroidism," *Journal of Zhejiang University Science B*, vol. 11, no. 3, pp. 218–220, 2010.