

Introduction

Elexacaftor/Tezacaftor/Ivacaftor (Trikafta) is a combination medication used for the treatment of cystic fibrosis.

- Ivacaftor is a chloride channel opener
- Elexacaftor and Tezacaftor are CFTR modulators

We present a unique case of a patient who developed anxiety after initiation of the medication.

Although a few cases have been written about this combination causing worsening symptoms in those with pre-existing anxiety and depression (1,2), this is the first case of Elexacaftor/Tezacaftor/Ivacaftor causing de novo anxiety.

Case Presentation

A 37 year-old male with cystic fibrosis, on Elexacaftor/Tezacaftor/Ivacaftor for the prior 6 months, history of prior lung transplantation (3 years prior to presentation), with no past psychiatric diagnoses, and no prior anxiety symptoms was admitted from his transplant clinic for failure to thrive and concerns for new anxiety symptoms.

The patient reported his generalized anxiety began on initiation of Elexacaftor/Tezacaftor/Ivacaftor and rapidly escalated over a span of 3 months.

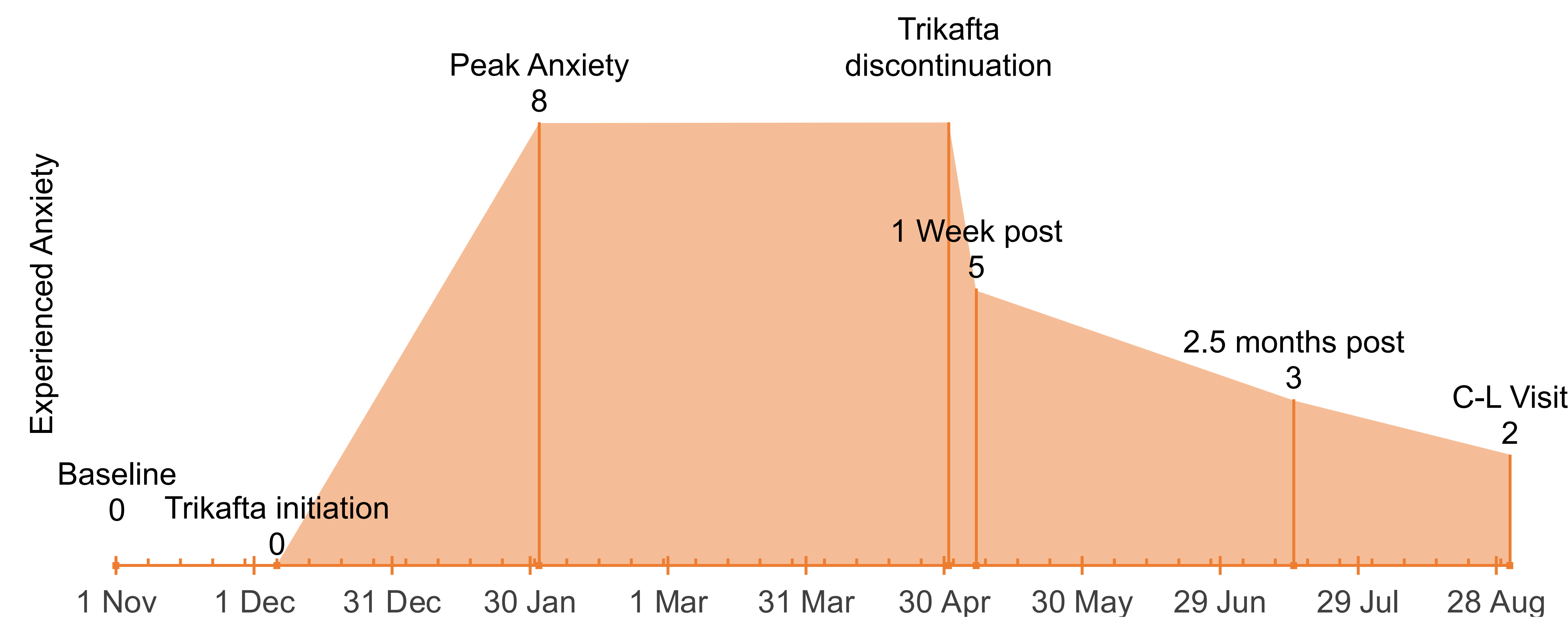
He denied other medication changes or notable life events during that period.

He endorsed nightly cannabis use throughout the case and denied other recent substance use.

Elexacaftor/Tezacaftor/Ivacaftor was subsequently discontinued.

- In 1 week he reported marked improvement in symptoms
- In 2.5 months he experienced near symptom resolution

Case Timeline



Review of Symptoms

He reported the following specific anxieties among more generalized anxiety:

- Fear that while driving on the highway he may be involved in an accident causing him to drive off the highway or that the car steering column would impale him
- Inability to order tickets for holiday vacations due to fear a catastrophic event would occur
- Fear that his family's business would be burglarized while he was present leading him to missing 10 work days in one month

He endorsed somatic symptoms when anxious including diaphoresis, and tremor.

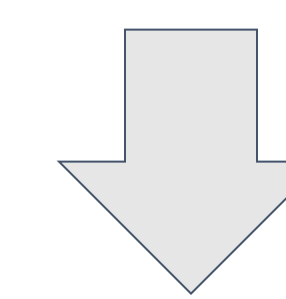
These anxieties led to agoraphobic behaviors including stopping attendance to his bible group.

He denied:

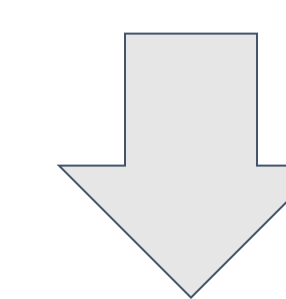
- Mood symptoms including depression and mania
- Social anxiety
- Paranoia
- Delusions
- Auditory or visual hallucinations

Recommendations

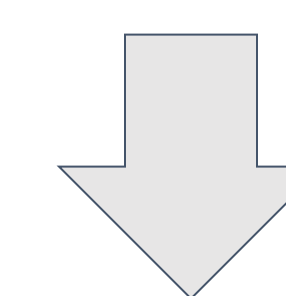
Screen for anxiety and mood symptoms as well as psychiatric history prior to initiation of Elexacaftor/Tezacaftor/Ivacaftor



Closely monitor for anxiety and mood symptoms following initiation of Elexacaftor/Tezacaftor/Ivacaftor



If clinically significant anxiety or mood symptoms develop, consider dose reduction or discontinuation of Elexacaftor/Tezacaftor/Ivacaftor



If unable to discontinue or adjust the medication and/or symptoms do not significantly improve, consider initiation of a first-line medication to target the remaining symptoms

Conclusion

There is a dearth of literature regarding the association of cystic fibrosis combination treatment with worsening pre-existing mental health symptoms.

The few prior studies have found dose reduction or discontinuation of Elexacaftor/Tezacaftor/Ivacaftor is effective for treating worsened symptoms although self-reported symptoms may persist for several months (1,2).

This report is the first known case of new onset anxiety strongly linked to Elexacaftor/Tezacaftor/Ivacaftor initiation, and subsequent reduction of symptoms with discontinuation.

It introduces a new adverse effect to be aware of, and highlights the importance of close monitoring of psychiatric symptoms in all patients who are initiated on CFTR combination therapy.

This case further highlights the importance of interdisciplinary care and collaboration between the patient, lung transplant team, and the consultation and liaison psychiatry team.

References

1. Heo, S., Young, D. C., Safirstein, J., Bourque, B., Antell, M. H., Diloreto, S., & Rotolo, S. M. (2022). Mental status changes during elexacaftor/tezacaftor / ivacaftor therapy. *Journal of cystic fibrosis : official journal of the European Cystic Fibrosis Society*, 21(2), 339–343. <https://doi.org/10.1016/j.jcf.2021.10.002>
1. Tindell, W., Su, A., Oros, S. M., Rayapati, A. O., & Rakesh, G. (2020). Trikafta and Psychopathology in Cystic Fibrosis: A Case Report. *Psychosomatics*, 61(6), 735–738. <https://doi.org/10.1016/j.psych.2020.06.021>