

INTRODUCTION

- Oseltamivir, commonly sold under brand name Tamiflu, is an antiviral medication used for treatment & prevention of influenza A & B in children and adults over 2 weeks with symptoms of influenza for no more than 2 days.
- This case study describes a relatively rare but very important behavioral complication of commonly prescribed Oseltamivir, which may include delirium, severe behavior disturbances, and self-injury including fatal.

CASE PRESENTATION

- The patient is a 35 year old male with no significant past medical history who presented to clinic with acute severe anxiety (GAD7 score of 16/21), frequent panic attacks, and mild depression (PHQ9 score of 8/27). Symptoms started 7 days after diagnosis of Influenza B infection and 2 days after he completed Oseltamivir.
- Two days after his clinic visit, he presented to emergency room with severe dizziness and was diagnosed with a vasovagal episode. The next day, he started having acute symptoms of unprovoked severe anxiety. He had more than dozens of “brain zaps” per day, described as electrical shocks in brain followed by panic attacks which would last from few minutes to 45 minutes.
- Social history included marijuana use and Doxylamine (Unisom) to help with sleep 2-5 times per week for about 10 years.
- We encouraged patient to taper down both. On 6 week follow up, he was able to stop Doxylamine and decreased Marijuana use to up to 1-2 times per week. He was back to his baseline at 12 weeks follow up.



Fig.1 A sample box of Tamiflu (Duane Reade pharmacy in New York, Jan. 10, 2013. Andrew Kelly/Reuters, FILE)

DISCUSSION

- Oseltamivir, a neuraminidase inhibitor, is commonly prescribed antiviral drug in United States. This medication is generally well tolerated; however, evidence shows that it may cause behavioral disturbances ranging from mild delirium to severe neuropsychiatric events that may include fatal self-inflicted injuries, predominantly in adolescents.
- Mechanism of behavior changes is not fully known and it is speculated that alterations in anion transporters' activities in brain might have an effect on behavior in susceptible individuals.
- The incidence of these psychiatric effects would potentially increase in patient with underlying psychiatric illness or patient using substances that can affect central nervous system, such as in our patient.

DISCUSSION (Cont'd)

- The Cochrane Neuraminidase Inhibitors Review Team reported that Tamiflu has not been shown to prevent serious bacterial infections that may occur as a complication from influenza and taking Oseltamivir within 48 hours of getting sick may recover symptoms only 1 day faster than natural course.
- Furthermore this is not clear whether people who have flu are less contagious after taking Tamiflu.

CONCLUSION

- Patients with suspected influenza infection or exposure require thorough evaluation regarding duration and severity of their symptoms before starting Oseltamivir. Although, this is considered a relatively safe medication it has potential to cause severe behavior disturbances especially in the young population, including fatal self-injury. Risk may further increase if patient is already using medications affecting nervous system.
- The trade-off between benefits and harms of using Oseltamivir and shared decision with patient may help decrease unnecessary use of Oseltamivir when it is not needed.

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