



Treatment with Oseltamivir in Early Suspected Cases of COVID19

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Case Report

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Abstract

Oseltamivir (Tamiflu), a neuraminidase inhibitor, an antiviral medication. Although of its effectiveness, still the fear of Tamiflu resistance is concerning. Tamiflu is available in limited pharmacies with an expensive price. It is available in hospitals for influenza after throat swab confirmation. Tamiflu is given as trials to give prophylaxis to COVID19 as there is no resistance to it yet in Iraq due to its limited use. This is a descriptive study, included 37 patients attended to Al-Dora Family Medical Centre from 1st to 31 of December. The cases ranged from 7 years old to 75 years old, presented with various symptoms included shortness of breath, fever, headache, diarrhea, malaise, chest pain, shivering, and dry cough. The study gives a conclusion that Tamiflu may have a role in prophylaxis against covid19 especially in countries with no resistance to it.

Keywords: Oseltamivir; Neuraminidase Inhibitor; Influenza; Prophylaxis; Tamiflu

Introduction

Oseltamivir (Tamiflu), a neuraminidase inhibitor, an antiviral medication, is used as prophylaxis and treatment for seasonal flu and it is used recently for swine flu and bird flu in people at high risk of complications within 48 hours of first symptoms of infection. It is approved by the US Food and Drug Administration in 1999.

A Randomized Controlled Trials showed that early initiation (within 36 h) of treatment reduced illness duration by 30% and severity by 40% [1,2]. It also significantly reduced the frequency of secondary complications of influenza, and early initiation of the antiviral drug might decrease the frequency of complications in high risk population. Other studies gave similar results.

Relenza (zanamivir) followed the same pattern in accompanying Tami flue as many randomized trials appealed its role in prophylaxis and treatment of flue [1,3]. Although of its effectiveness, still the fear of Tamiflu resistance is concerning [4,5]. Fortunately, In Iraq Tamiflu could not be available easily [6-10]. Tamiflu is available in

limited pharmacies with an expensive price. It is available in hospitals for influenza after throat swab confirmation. Many studies explain Tamiflu resistance and the emergence of a new strain of the virus.

By emerging the COVID19 pandemic, researchers try to find any prophylaxis that can protect people [11-14]. Covid19 is a novel human coronavirus (SARS-CoV-2), was identified in China in December 2019. Studies gave the possibility of Asymptomatic Carrier Transmission of COVID-19 and variable incubation period as it ranges from five to fourteen days that force the health care provider to look for solutions.

Influenza vaccine is one of the first issues that researchers think but many cases of covid19 appeared with history of influenza vaccine [15,16]. Vaccines still have an interesting topic as children who complete their vaccines had no or mild infection in Iraq. This brings an inquiry; could one of childhood vaccine give protection to covid 19.

Tamiflu is given as trials to give prophylaxis to covid 19 as there is no resistance to it yet in Iraq due its limited use. Hand wash, mask-wearing and social isolation would give

additional protection.

Objectives

- Tamiflu may be used as prophylaxis.
- It may lessen the severity of covid19 if it is used in early disease.

Subjects and Methods

This is a descriptive study, included 37 patients who attended to Al-Dora Family Medical Centre from 1st to 31 of December. The cases ranged from 7 years old to 75 years old, presented with various symptoms included shortness of breath, fever, headache, diarrhea, malaise, chest pain, shivering, and dry cough. The patients looks tired and terrified, they describe their illness as strange flue. At that times Corona infection is not familiar in Iraq so most cases considered as a type of influenza. Many similar cases presented in other primary health care centers and within the medical field. The cases were severe enough to take the whole attention so medications were prescribed; Amoxil capsule, oseltamivir tab (Tamiflu), butadin inhaler, and paracetol tab. The cases were sent to Al-Yarmook hospital for throat swab. The results showed "it is not influenza infection, it is another viral infection", as COVID19 test was not available in Iraq at that time. Chest X-ray was sent for some cases, usually the severe cases, as we were not aware of corona yet. It showed bilateral and/or multilobar involvement. The treatment of cases continues until full recovery with no complications. The contacts to suspected cases were 15 persons. They were given Tamiflu as prophylaxis regime followed for influenza since we did not expect Corona pandemic yet. Out of those contacts, 11 persons did not experience any symptoms, others had mild symptoms.

Results

Young age groups did not present in suspected cases.

Age groups	No.	Percent
7-15	7	18.90%
16-25	0	0%
26-35	0	0%
36-45	8	21.60%
46-55	5	13.50%
56-65	8	21.60%
66-75	9	24.30%

Table 1: Age groups of corona suspected cases.

Out of 37 cases attended the family medical center, 30 cases presented dyspnea and the whole cases had fever.

Symptoms	No.	Percent
Dyspnea	30	81%
Fever	37	100%
Cough	28	75.60%
Headache	7	18.90%
Diarrhea	4	10.80%
Malaise	29	78.30%
Chestpain	23	62.10%
Shivering	18	48.60%

Table 2: Showed the symptoms of presented cases.

Cases received Tamiflu presented with mild symptoms as many cases presented with low-grade fever.

Symptoms	Tamiflu	Influenza vaccine	None	Total
Mild; low grade fever with or without headache sore throat	9	600.00%	0	15
Severe cases; dyspnea, fever with or without headache, diarrhea, and cough	0	5.00%	17	22
Total	9	11.00%	17	37

Table 3: Variation of symptoms according to tamiflu and influenza vaccine.

Contact to suspect cases were 15 persons, 73.3% of them showed no symptoms, while the others showed mild symptoms after taking Tamiflu as prophylaxis.

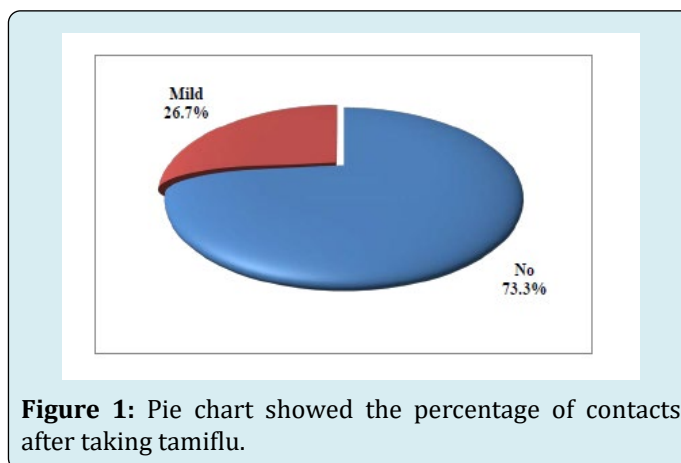


Figure 1: Pie chart showed the percentage of contacts after taking tamiflu.

Discussion and Conclusions

Young age groups did not present in this study, Children less than 7 years as well as. This gives the possibility of the role of immune system in facing covid19. In addition to the suspicion of childhood vaccination could give protection to covid19, as rarely a child case is discovered.

All the cases had fever. It ranges from mild to severe, continuous or intermittent. Sometimes, it is accompanied with other symptoms, mainly, dyspnea, headache and cough. Cases received Tamiflu showed mild symptoms as its use is limited in Iraq so no resistance to it yet.

Cases had history of influenza vaccine had variable results. Anyway, these cases were old age with comorbid conditions that made them more vulnerable to covid19. When Tamiflu was given to contacts, they showed no or mild symptoms.

The study gives a conclusion that Tamiflu may have a role in prophylaxis against covid19 especially in countries with no resistance to it.

Limitation of the Study

Cases in the current study were in a limited area so results cannot be generalized. This requires further studies.

Recommendations: Supplying family medical centers with more resources to face covid19.

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