

SHORT COMMUNICATION ΒΡΑΧΕΙΑ ΔΗΜΟΣΙΕΥΣΗ

Air travel and the emergence of the new swine flu Thailand's story

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Αεροπορικά ταξίδια και η εμφάνιση της νέας
γρίπης των χοίρων: Περιστατικό από την Ταϊλάνδη

Περίληψη στο τέλος του άρθρου

Key words: Aeroplane, Swine flu

INTRODUCTION

The potential for disease transmission during air travel is now recognized as an important concern in discussions regarding effective infectious disease control. Many new and emerging contagious diseases are carried to new settings during air travel.¹ Current concerns in air medical practice include "How to prevent disease transmission via air travel" and "How to transport patients with new emerging infections via air". The transmission of influenza from one place to another via air travel has been reported for years.² This brief article discusses air travel in relation to the emergence of the new swine flu infection in Thailand.

TRANSMISSION OF SWINE FLU VIA AIR TRAVEL TO THAILAND

The first known case of swine flu in Thailand was reported in late April, 2009. The disease was first detected in a female on the third day following her flight back from Mexico to Thailand. Although lacking a confirmed causative relationship, this case supports the potential of air travel as a vehicle for carrying a pre-symptomatic infected patient from a primary endemic area to a new setting.

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Subsequently, Hsu et al concluded that "as soon as influenza is spread to the top 50 global airports, transmission is greatly accelerated".³ As soon as the problem emerged in Thailand, the local Thai Center for Disease Control (CDC) instituted a series of protocols for the prevention of further disease spread. A questionnaire and thermoscanners were used at the airport for screening of immigrants. Special aircraft cleaning measures were initiated. Reporting of passengers exhibiting signs and symptoms considered suspicious and/or confirmatory for the disease was made mandatory. Despite these efforts, however, control of swine flu was not successful.

New cases in individuals with a recent history of air travel from several areas of the world were identified. Simultaneously, continuous domestic spread of disease was detected, resulting in a Thailand swine flu pandemic continuing to the present time.

TRANSPORTATION OF IDENTIFIED SWINE FLU CASES VIA AIR TRANSPORT IN THAILAND

A topic relevant to this discussion involves the transportation of patients with confirmed infection from one geographical location to another. Unfortunately no report is currently available. Extensive literature and web search revealed only one case of air transport of a patient with confirmed swine flu. In this instance, the transport vehicle was a helicopter. The case involved a 24 year-old pregnant patient (gestational age 28 weeks, patient weight 115 kg) referred from a local hospital in Ratchaburi province to a tertiary level hospital in Bangkok, a distance of approximately 100 km.

This patient had a history of high fever and severe dyspnea, presenting on the first day after returning from caring for her son who had been hospitalized with non-respiratory illness at the local provincial hospital. The patient was subsequently hospitalized for 4 days in the provincial hospital, and this was the first case of swine flu to be confirmed by molecular (RT-PCR) diagnosis at this local hospital. Subsequently, the patient developed more pronounced respiratory distress, which eventually required mechanical ventilatory assistance. The physician in charge became concerned regarding the limited availability of antiviral drugs and appropriate facilities locally,

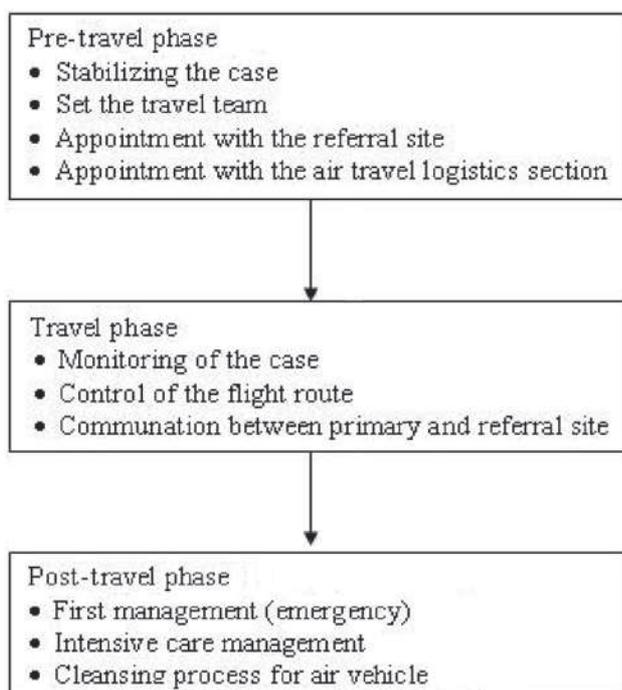


Figure 1. Schematic diagram showing air travel of the indexed case.

and decided to request transfer of this patient to the tertiary referral center.

The logistical process was supported by the Ministry of Public Health. The transport helicopter was provided by the local border patrol police unit. The transport was performed at night, and lasted one hour (from 23:00–24:00 hours), at an estimated cost of 1,300 US dollars. While en route, standard respiratory care was maintained, under consultation with the expert physician from the referral hospital.

Recommended protective devices were used by everyone participating in the transport process, and the transport was completed without incident. After arrival at the referral hospital, the patient was subsequently admitted to the intensive care unit (ICU), was sedated, and received additional assisted ventilation and intravenous administration of an antiviral drug (oseltamivir).

This patient ultimately died of respiratory failure due to superimposed bacterial lung infection 7 days after delivery by Caesarian section of a live infant. Her child also got

swine flu. Of interest, there was no transmission of swine flu to anyone contacting the patient in either the local or the referral hospital, nor to anyone participating in the air transport process. Resultantly, this case study implies that air transport of a confirmed infected swine flu case is possible without sequelae if strict infection control standards are followed within a preplanned transport process (fig. 1).

ΠΕΡΙΛΗΨΗ

Αεροπορικά ταξίδια και η εμφάνιση της νέας γρίπης των χοίρων: Περιστατικό από την Ταϊλάνδη

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Η δυνατότητα μετάδοσης νοσημάτων κατά τη διάρκεια αεροπορικών μετακινήσεων θεωρείται σήμερα σημαντικός παράγοντας συζητήσεων όσον αφορά στον αποτελεσματικό έλεγχο των διαφόρων νοσημάτων. Στο παρόν άρθρο συζητείται η σχέση μεταξύ των αεροπορικών ταξιδιών και της εμφάνισης της λοίμωξης από γρίπη των χοίρων στην Ταϊλάνδη.

Λέξεις ευρητηρίου: Αεροπορικά ταξίδια, Γρίπη των χοίρων

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