

Influenza B outbreak in female psychiatric ward of Hospital Kuala Lumpur, Malaysia

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SUMMARY

Influenza outbreaks in tropical countries are rarely reported. This article reports four cases of influenza within a psychiatric ward of a tertiary hospital in Malaysia. These were patients with severe mental illness who were involuntarily admitted and did not show the classical triad of influenza-like-illness (ILI) at the beginning. However, severe respiratory complications developed requiring intubation. Referral and cooperation with the infectious disease team was initiated to help manage the outbreak while continuing psychiatric treatment. Incidences of influenza among hospitalised psychiatric patients should be treated seriously with immediate multidisciplinary approach to prevent severe unwanted complications.

INTRODUCTION

Influenza is a respiratory tract infection that usually presents with upper respiratory tract symptoms and fever. The incidence of influenza in Malaysia has rarely been highlighted until the global pandemic of H1N1 in 2009.¹ The Malaysian Influenza Surveillance reported 466 influenza cases between 1997-2005.² The Institute for Medical Research (IMR) received 7117 specimens of patients with influenza-like illness (ILI) between 2005-2009, in which 14% (993) were positive for influenza.³ Influenza is underappreciated in Malaysia due to the perception by healthcare workers (HCW) that influenza is a benign illness without significant complication, difficult to be diagnosed because of limited accessibility to diagnostic facilities and lack of efficient antimicrobial treatment.¹ As such, influenza is often underestimated when it occurs in a closed medical facility such as a psychiatric ward.

This article reports four cases of influenza B that happened within the one week between 17/4/2016 and 25/4/2016 and the inter-disciplinary management that followed. To the authors' knowledge, this kind of outbreak in a Malaysian psychiatric facility has yet to be published. This manuscript has been submitted for registration and approval by the National Medical Research Register (NMRR) No. 16-1934-33053.

CASE 1

Ms. ARM, a 51-year-old woman with schizoaffective disorder was admitted on 2/3/2016. Co-morbidities were poorly-controlled diabetes mellitus and dyslipidemia. On day 46 of

admission (17/4/2016), she developed respiratory problems with her oxygen saturation falling to 91%. Her conscious levels started to fluctuate 12 hours later. Her medications were Aripiprazole 30mg OD, Lithium Carbonate 150mg BD, Sodium Valproate 600mg OM/800 mg ON and Benzhexol 2mg TDS. She was intubated for airway protection and transferred to the General Intensive Care Unit (GICU). She was initially treated as a case of aspiration pneumonia. The Respiratory Virus Screen taken on 26/4/2016 showed positive results for influenza B. She was not started on Oseltamivir.

CASE 2

Mrs. N, a 50-year-old woman with bipolar mood disorder was admitted on 13/4/2016. She had been on Lithium treatment for 26 years and had chronic kidney disease (CKD). On day-7 of admission (20/4/2017), she developed fever (39°C) without any respiratory symptoms. Her medications were oral Olanzapine 10 mg BD, Lithium Carbonate 600mg OM/750 mg ON and Clonazepam 1 mg ON. On day-8 her oxygen saturation dropped to between 86%-90%. She was intubated and transferred to GICU. A sample for influenza taken on day-14 was positive for influenza B. She was not started on Oseltamivir.

CASE 3

Ms. KA, 51-year-old woman with schizoaffective disorder, diabetes mellitus and dyslipidemia was admitted on 10/4/2016. She became feverish with a temperature of 37.7°C on day 13 of admission (23/4/2016). Medications included oral Clozapine 75mg BD, Aripiprazole 10mg ON, Sodium Valproate 400mg OM/600mg ON and Benzhexol 2mg ON. The fever worsened on day 14 (24/4/2016) with sore throat and rhinorrhea. Her oxygen saturation however remained 100%. She was diagnosed as pneumonia and transferred to the medical ward. She was transferred back to the psychiatric ward after one day due to difficulties managing her psychosis. Her throat swab on 26/4/2016 was positive for influenza B and she was subsequently started on oral Oseltamivir 75mg BD.

CASE 4

Mrs. LS, a 60-year-old woman with schizoaffective disorder, diabetes mellitus and hypertension was admitted on 17/4/2016 for suicidal attempt. She received two Electro-Convulsive Therapy (ECTs) but further ECT on day-8 of

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admission (25/4/2016) was cancelled because of fever (37.5°C). She appeared lethargic and ill with an oxygen saturation of 95%. There were no respiratory signs or symptoms. Medications included Olanzapine 10mg ON and Fluoxetine 20mg OD. Her GCS dropped to 8 on day-9 of admission (26/4/2016) and she was intubated. Her tracheal swab taken on 26/4/2016 was positive for influenza B. She was started on oral Oseltamivir 75mg BD.

DISCUSSION

In Malaysia, seasonal human influenza is not a notifiable disease compared to avian influenza.⁴ Most cases of influenza in private hospitals are diagnosed using rapid influenza test kits. In tertiary public hospital such as Hospital Kuala Lumpur however, influenza is usually diagnosed either by immunofluorescence assays or by Polymerase Chain Reaction (PCR). Many clinicians do not routinely send investigation for influenza because of its self-limiting features.

Psychiatric ward is one such space where individuals with different morbidities congregate in close-living spaces that can be overcrowded. Overcrowding in psychiatric ward can be prevented by stopping unnecessary admissions through emphasizing care by specialist or primary care out-patient clinic and community psychiatry service.

Sentinel features that occurred were fever, sudden drop of oxygen saturation and fluctuating consciousness. The presence of fever in psychiatric in-patients should always raise alarm bells. Fever can be due to adverse effects to medication or infection such as dengue fever. Dengue serology was negative for all the patients in this case series. Prior exposures to psychotropics with no adverse effects reduced the possibility that fever in this case series was due to effects of medications. Although influenza is often thought of as a self-limiting condition, underlying medical and psychiatric comorbidities and use of psychotropics may potentially increase the risk of excessive sedation resulting in the need for the short or longer- term ventilatory support.

The outbreak itself could have been avoided had the patients and the staff received immunization for influenza. According to the Malaysian Guidelines for Adult Immunization, persons aged 18-49 with one or more medical conditions, persons aged 50-59 and persons living in institutional settings should be vaccinated against influenza.⁵ The guidelines also recommends annual quadrivalent influenza vaccinations for all HCWs.⁵

Other contentious issues were the difficulties faced in managing patients with prominent aggression and psychosis by medical staff and the management of medical problems by the psychiatry staff. The staff in the psychiatric ward usually monitors basic medical parameters and may overlook early indicators of medical emergencies. The ID team had initially planned to transfer the above patients to the isolation ward within the medical unit. However, placing these patients in the isolation ward raised safety issues. As such, a decision was made to isolate the patients in the psychiatric ward. The female psychiatric ward was therefore temporarily closed to facilitate this, diverting all subsequent female admissions to a temporary ward. Therefore, identification of at-risk patients and early initiation of co-management in a suitable ward in future, needs to be addressed.

Measures to reduce infection risk included daily surveillance of patients and staff. Throat swabs were performed if required. Proper hand hygiene and cough etiquette was also implemented.

CONCLUSION

Although influenza is often viewed as benign, an outbreak of influenza among psychiatric in-patients complicates the management of individual patients and requires immediate multidisciplinary collaborative work.

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