



Service Priorities and Programmes
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Survey on Patients on Lithium- Thiazide/ ACEi/ NSAID combination in psychiatric clinics in Kowloon East Cluster

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Introduction

Drug-induced Lithium toxicity is a common and preventable cause of lithium toxicity. Three major drug classes have been identified as potential precipitants of Lithium toxicity, including: (1) Thiazide (or Thiazide-like) diuretics, (2) Angiotensin-converting enzyme inhibitors (ACEi) and (3) Non-steroidal anti-inflammatory drugs (NSAIDs). The potential risk of lithium toxicity induced by combination of these drugs prescribed by different clinics may be overlooked, especially in busy clinic settings. The current study looks into the problem by identification and investigation on patients on Lithium- Thiazide/ ACEi/ NSAID combination in our psychiatric clinics.

Objectives

- (1) To investigate the patient and treatment profiles of patients on Lithium- thiazide/ ACEi/ NSAID combination in psychiatric clinics in Kowloon East Cluster (KEC) (2) To identify patients having high risk of lithium toxicity needing immediate action among patients on Lithium- thiazide/ ACEi/ NSAID combination

Methodology

Outpatients in KEC psychiatric clinics, including United Christian Hospital Psychiatric Clinic (UCHPC) and Yung Fung Shee Psychiatric Centre (YFSPC) currently on Lithium- Thiazide/ ACEi/ NSAID combination were identified from a list obtained from the senior pharmacist of KEC. The psychiatric outpatient case notes and electronic patient records (ePR) were reviewed for extraction of background and clinical information. Patients with high risk of Lithium toxicity will be identified for immediate actions. The case doctors of all patients on Lithium- Thiazide/ ACEi/ NSAID combination identified will be reminded to review the regimen and monitor Lithium level and RFT once every 6 months.

Result

(A) Number of patients on Lithium- Thiazide/ ACEi/ NSAID combination: 28 (B) Background: Age: Mean 54; Interquartile Range (IQR) 49-60 Number of patient with Age >65: 5 Gender: 15 male, 13 female Follow-up clinics: YFSPC: 19 UCHPC: 9 (C) Number of patients on

Lithium - Thiazide/ ACEi/ NSAID combination Combined drug with Lithium No.
 of patients Thiazides 4 Hydrochlorothiazide 1 Indapamide 2 Moduretic
 1 ACEi 22 Enalapril 8 Lisinopril 12 Perindopril 2 NSAIDs
 2 Diclofenac 1 Ibuprofen 1 Total: 28 (D) Psychiatric diagnosis of
 patients on Lithium - Thiazide/ ACEi/ NSAID combination: Psychiatric diagnosis
 No. of patients Bipolar affective disorder 13 Schizoaffective disorder 6
 Schizophrenia 3 Depression 3 Delusional Disorder 2 Organic Personality
 Disorder 1 Total: 28 (E) Risk factors of Lithium toxicity Medical illnesses
 of patients on on Lithium - Thiazide/ ACEi/ NSAID combination Medical Illness
 No. of patients Hypertension 26 Diabetes 14 Hyperlipidemia 10
 Cardiovascular 3 Thyroid 2 Renal 1 Respiratory 1 History of Lithium
 toxicity Number of patients with history of Lithium of toxicity: 1 (F) Duration of
 treatment Duration of Lithium treatment: Mean: 98 months, IQR 41-150 months
 (G) Blood taking Lithium level checked after start of Lithium - Thiazide/ ACEi/
 NSAID combination: 28 Latest renal function test Number of months from last
 blood test: Mean 4, IQR 2-6 Elevated Creatinine level: 11 Latest lithium level:
 Number of months from last blood test: Mean 5, IQR 4-8 Lithium level: all ≤ 1
 (H) Follow-up actions: Case doctors were contacted immediately and individually
 for patients requiring immediate actions for: - Lithium- Thiazide combination: 4 -
 High risk of Lithium toxicity Age ≥ 65 years: 5 Co-morbid heart failure: 0
 Co-morbid severe chronic renal failure (documented GFR < 10 ml/min): 0 A list
 of all patients on Lithium- Thiazide/ ACEi/ NSAID combination, together with a
 reminder for actions (blood check once every 6 months and to consider reviewing the
 regimen) were sent to all doctors and supervisors in UCH.