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Effectiveness of Deprescribing program in Patients with Chronic Diseases: A Parallel-run Family Physician & Pharmacist Clinic

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Introduction

Polypharmacy, defined as the simultaneous use of five or more chronic medications, causes significant risk to patients with chronic diseases. Polypharmacy increases the risk of adverse drug reactions, drug-drug interactions and non-compliance to medications. Deprescribing is the process of tapering, discontinuing, or withdrawing drugs, with the goal of managing polypharmacy and improving clinical outcomes. Evidence has shown that deprescribing can reduce medication related morbidities and enhance patients' compliance to chronic medications. A parallel-run family physician-pharmacist clinic was piloted in a General Out-patient Clinic (GOPC) from 20th May 2015 to 30th September 2015.

Objectives

This pilot study tried to review the clinical effectiveness of deprescribing program carried at Central Kowloon Health Centre of Kowloon Central Cluster.

Methodology

This is a retrospective case series study. Target cases were patients suffered from at least one of the defined 30 chronic diseases as suggested by the literature and was treated by at least 5 chronic medications. A pre-consultation meeting with pharmacist was carried out before each session to align the management plan for deprescribing. Medication regime which involved suboptimal drug treatment on chronic diseases, unnecessary drugs and adverse drug events would be revised and deprescribed during medical consultation, followed by assessment and counselling by pharmacist. The baseline demographic data, numbers of total drug items, numbers of chronic medications, total doses before and after the program and the mean blood pressure before and after the program were compared using the pair student t-test, $P < 0.05$ is considered as statistically significant.

Result

Totally 35 cases (male, 51%) were recruited into this study, with an average age being 76.5 +/- 8.5 years, the average morbidity is 5.2 +/- 1.4 and they were taking 9.3 +/-

2.4 items of all medications, 7.9 +/- 1.9 of chronic drug items, 13.8 +/- 3.8 pills per day, 10.5 +/- 2.6 doses per day and mean systolic blood pressure (SBP) value of 134.2mmHg +/- 18.6 and mean diastolic blood pressure (DBP) of 65.5mmHg +/- 9.7. A total of 149 drug related problems were identified, with 109(73.2%), 25(16.8%) and 15(10%) interventions involving suboptimal drug treatment, unnecessary drugs and adverse drug events respectively. When the patients exited the deprescribing program, they were taking fewer total items of medications (7.9 +/- 2.0, P < 0.001), fewer number of chronic medications (7.0 +/- 1.8, P < 0.001), fewer total number of pills per day (11.7 +/- 3.7, P < 0.001) and fewer total number of doses per day (8.9 +/- 2.3, P < 0.001). Their mean SBP (133.0mmHg +/- 16.5, P = 0.73) and DBP (67.2mmHg +/- 12.4, P = 0.31) of patients remained stable after the program. The parallel-run family physician-pharmacist clinic showed significant statistical reduction of the number of medications consumed by chronic patients in GOPC. Their daily pill burden were also reduced . Their blood pressure remained stable after the program.