Deprescribing for Better Patient Outcomes in Chronic Long-Term Care and Role of Clinical Pharmacological Review

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Abstract
Prescribing is always a risky proposition with a varied degree of vulnerability embedded in the act. It is therefore important to do a perfect balancing in favor of benefit against harm. Deprescribing is the planned and supervised process of dose reduction or stopping of prescribed medications, aimed at correcting inappropriate polypharmacy and improving patient outcomes. Informed reconciliation for potential deprescribing need should be a norm in all patients receiving many medications for multiple chronic comorbidities and is best done in partnership with the prescribing physician. Judicious deprescribing through clinical pharmacological review ensures better patient outcomes. We present here a case series from our experience in clinical pharmacology outpatients’ department (OPD), highlighting how de-prescribing helps achieving better patient outcomes.

“You may have needed the medicine then; it might not be the best choice now!”

Optimizing medication use through targeted deprescribing is crucial for better and safer management of chronic conditions. Deprescribing, an important component of medication reconciliation, is the planned and supervised process of dose reduction or stopping of prescribed medications, aimed at correcting inappropriate polypharmacy and improving patient outcomes.¹,² For certain medications, the dose reduction should be done slowly to avoid withdrawal effects.³ Deprescribing is best done in partnership with the prescribing physician, following the “no blame, no shame” principle, and guarding primary physician’s professional dignity. We present here a case series from our experience in clinical pharmacology outpatients’ department (OPD), highlighting how de-prescribing helps achieving better patient outcomes.

Case 1

AJ, a 56 years old, obese (BMI 36 kg/m²) female, on multiple medications for long-term treatment of her chronic ailments – hypertension, type 2 diabetes, osteoarthritis knee, and finding it too challenging to adhere to such treatments, visited our clinical pharmacology OPD, seeking reconciliation support. On presentation, she had knee pain and severe weakness for 5 days, and history of pedal swelling for 5 months. She was on daily glimepiride 4mg, metformin 2gm, pioglitazone 15mg, amlodipine 5mg, and rose hip extract, as well as FDCs of pregabalin+ methylcobalamin, rosuvastatin+aspirin, tramadol+paracetamol, glucosamine+diacerein, calcium carbonate+vitD3, pantoprazole+domperidone. Lifestyle modification, physiotherapy and orthopedic consultation were advised. After 6 months, her BMI reduced to 28 kg/m² with much decrease in pain and no pedal swelling. Investigations suggested; Cr-1.2 mg/dL, eGFR-50.5 ml/min/1.73m², HbA1c-6.7%.

Her pedal edema could have resulted from the long-term use of pregabalin, pioglitazone and amlodipine, and the same might have been further contributed by compromise in kidney function secondary to repeated spells of diuretics intake in the last few years, can explain. Prescribing frusemide for pedal swelling without addressing the iatrogenic factors was inappropriate and it led to hyponatremia. This was an example of prescribing cascade which could be well managed by deprescribing.¹ Weight loss is important for osteoarthritis management in obese patients. Anti-diabetes drugs like glimepiride and pioglitazone that are known to increase weight, were therefore replaced with other more suitable options. With eGFR below 45 ml/min/1.73 m², metformin dose was halved, dulaglutide and

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canagliflozin low dose were used. The weight reduction relieved her knee joint pain. With de-challenging of amlodipine, pregabalin and pioglitazone, pedal swelling also diminished. Pantoprazole reduces absorption of calcium carbonate; we replaced calcium carbonate with calcium citrate the absorption of which is not affected by pantoprazole.

**Case 2**

BG, 88 yr old female, on long-term treatment with cilnidipine, MDIs and l-thyroxine replacement, for hypertension, COPD and hypothyroidism. For a recent episode of low back pain, she was prescribed deflazacort, pantoprazole along with FDCs of gabapentin+nortriptyline, pregabalin+nortriptyline, and aceclofenac+paracetamol by an orthopedician. After 5 days of medicine intake, patient encountered severe GERD symptoms along with dryness of mouth and cough. On gastroenterology consultation, she was prescribed deflazacort, pantoprazole along with FDC of calcium+vitaminD3. Patient was started duloxetin, pregabaline, and an FDC of calcium+vitaminD3. Patient was reviewed after 1 month. There were no further complaints. The adherence was satisfactory now.

The use of high dose of nortriptiline in this patient may account for the GERD symptoms. Treating an elderly with three prokinetics like itopride, domperidone and ondansetron was deemed inappropriate. She was also prescribed azithromycin. All these medications have propensity to prolong QT. For patients more than two drugs having potential to prolong QTc, one should de-prescribe medicines or monitor closely. In elderly anticholinergic burden should also be considered prior prescribing.

De-prescribing practices should aim at: (a) identifying potential inappropriateness in concurrent use of certain medications, and/or of their prescribed doses, (b) planning stoppage of a given medication, or at least for tapering its dose, (c) monitoring if de-prescribing achieved desired response, (d) documenting patient outcomes, good or not so good.

We believe informed reconciliation for potential de-prescribing need should be a norm in all patients receiving many medications for multiple chronic comorbidities. Judicious de-prescribing through clinical pharmacological review ensures better patient outcomes. The dilemma however exists if the right or privilege of de-prescribing should remain with the primary prescriber, irrespective of its potential and legitimate need.

Prescribing is always a risky proposition with a varied degree of vulnerability embedded in the act. It is therefore important to do a perfect balancing in favor of benefit against harm. A trained clinical pharmacist has the necessary expertise to practice de-prescribing when it indicated and is likely to serve the patient interests best.

**References**