

Drug-drug Interactions in the Geriatric Population

DRUG-INTERACTION PAIR

Continuous

ACEIs & ARBs³

Ex: Ramipril, Lisinopril, Candesartan



Spiromolactone⁷



Warfarin⁴



Glyburide¹



Phenytoin⁶

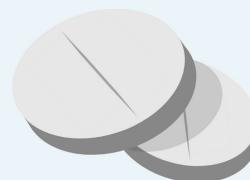


Added Medication

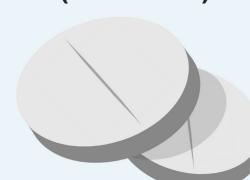
Trimethoprim-sulfamethoxazole
(TMP-SMX)



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(TMP-SMX)



DRUG TOXICITY/

Adverse Event

Hyperkalemia



Hyperkalemia



Hemorrhage



Hypoglycemia



Toxicity



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DRUG-INTERACTION PAIR

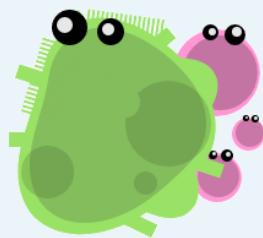
Continuous

Digoxin²



Added Medication

Macrolide Antibiotics
(Azithromycin / Clarithromycin /
Erythromycin)



DRUG TOXICITY/

Adverse Event

Toxicity



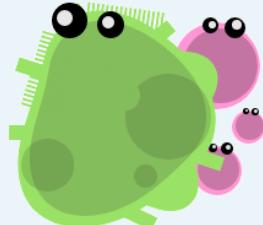
CCBs⁵

Ex: Amlodipine, Diltiazem, Nifedipine

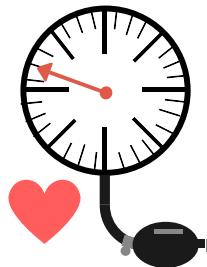


Macrolide Antibiotics

(Clarithromycin / Erythromycin)



Hypotension



1. Juurlink DN, Mamdani M, Kopp A, Laupacis A, Redelmeier DA. Drug-drug interactions among elderly patients hospitalized for drug toxicity. *JAMA* 2003;289(13):1652-1658.
2. Gomes T, Mamdani MM, Juurlink DN. Macrolide-induced digoxin toxicity: a population-based study. *Clin Pharmacol Ther* 2009;86(4):383-386.
3. Antoniou T, Gomes T, Juurlink DN, Loutfy MR, Glazier RH, Mamdani MM. Trimethoprim-sulfamethoxazole-induced hyperkalemia in patients receiving inhibitors of the renin-angiotensin system: a population-based study. *Arch Intern Med* 2010;170(12):1045-1049.
4. Fischer HD, Juurlink DN, Mamdani MM, Kopp A, Laupacis A. Hemorrhage during warfarin therapy associated with cotrimoxazole and other urinary tract anti-infective agents: a population-based study. *Arch Intern Med* 2010;170(7):617-621.
5. Wright AJ, Gomes T, Mamdani MM, Horn JR, Juurlink DN. The risk of hypotension following co-prescription of macrolide antibiotics and calcium-channel blockers. *CMAJ* 2011;183(3):303-307.
6. Antoniou T, Gomes T, Mamdani M, Juurlink DN. Trimethoprim/sulfamethoxazole-induced phenytoin toxicity in the elderly: a population-based study. *Br J Clin Pharmacol* 2011;71(4):544-549.
7. Antoniou T, Gomes T, Mamdani MM, Yao Z, Hellings C, Garg AX, et al. Trimethoprim-sulfamethoxazole induced hyperkalemia in elderly patients receiving spironolactone: nested case-control study. *BMJ* 2011;343:d5228.