

Choosing Wisely for Right Use of Medications



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There is No COI

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An elderly man is lying in a hospital bed, appearing frail. He is wearing a light blue hospital gown that is open at the chest. His left arm is in a white cast and is secured to the bed's frame. A nasal cannula is positioned in his nostrils, and a clear tube is visible near his waist. The bed has a purple patterned pillow and pink linens. The background shows a window with blinds.

Case #1: 85-year-old man
referred from
nursing home

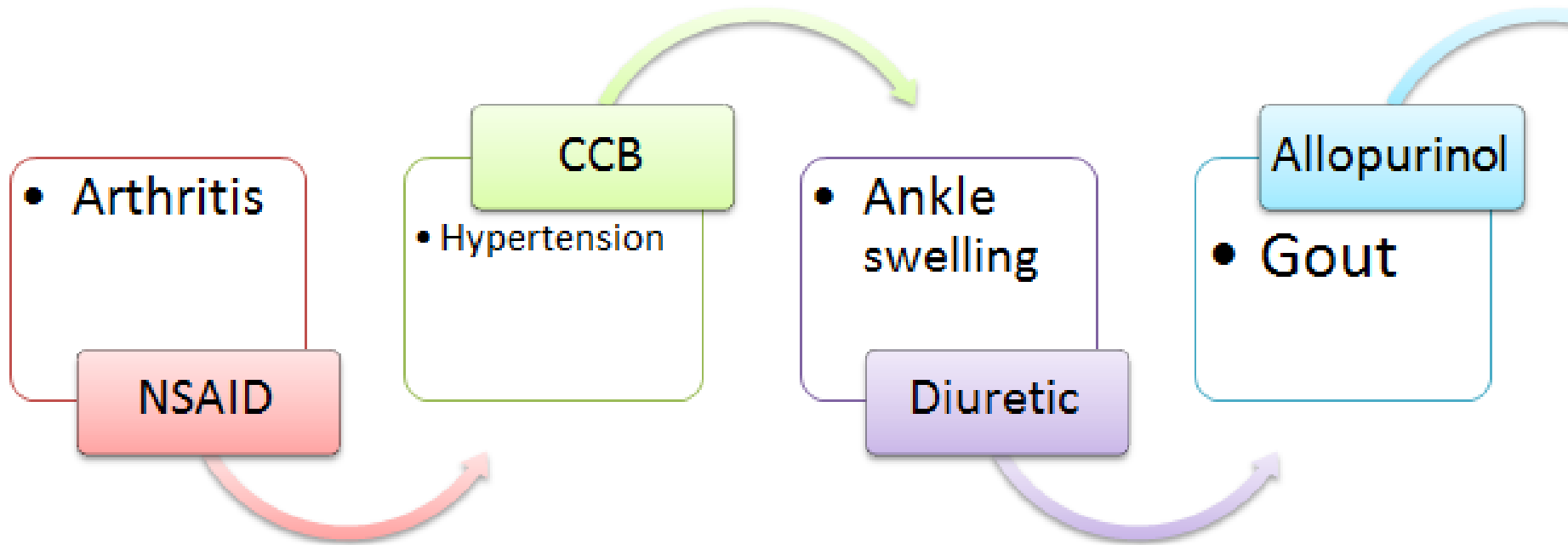
Fall
Aspiration
Diarrhea
Dementia
Parkinsonism

Rx: 14 Medications

Medication list

	medication	Class	Dose and timing	Medication reconciliation
1	Perospirone	Antipsychotic	8mg TID	Decreased
2	Clotiazepam	Benzodiazepine	5mg TID	Tapered off
3	Etizolam	Thienodiazepine	1mg HS	Tapered off
4	Clocapramine	Dopamine-serotonine receptor antagonist	25mg HS	Decreased
5	Chlorpromazine	Dopamine receptor antagonist	12.5mg	Discontinued
6	Promethazine	Anti-histamine and anti-cholinergic	12.5mg	Discontinued
7	Phenobarbital	Barbiturate	30mg	Discontinued
8	Biperiden	Anti-cholinergic	1mg Q6H	Discontinued
9	Candesartan	Angiotensin II receptor blocker	4mg QD	Switched to ACE inhibitor
10	Donepezil	Cholinesterase inhibitor	5mg QD	Discontinued
11	Chlorpromazine	Dopamine receptor antagonist	12.5mg QD	Discontinued
12	Sodium Ferrous Citrate	Ferrous citrate	50mg TID	Discontinued
13	Sennoside	Senna	48mg HS	Discontinued
14	Adjust A	Senna extract	80mg HS	Discontinued

処方カスケード (Prescription Cascade)



Medication cascade

Sedative → fall → fracture → operation → delirium



Antipsychotic → dysphagia → aspiration



Parkinsonism



Anticholinergic → dementia → **donepezil**



Constipation → **laxative** → diarrhea → dehydration



7 days after medication reconciliation



Rx: now 3 medications

ADL & cognitive function:
recovered

He eats for himself

Original Article

Polypharmacy and Adverse Drug Events Leading to Acute Care Hospitalization in Japanese Elderly

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Figure 1. The frequency distribution of the number of medications

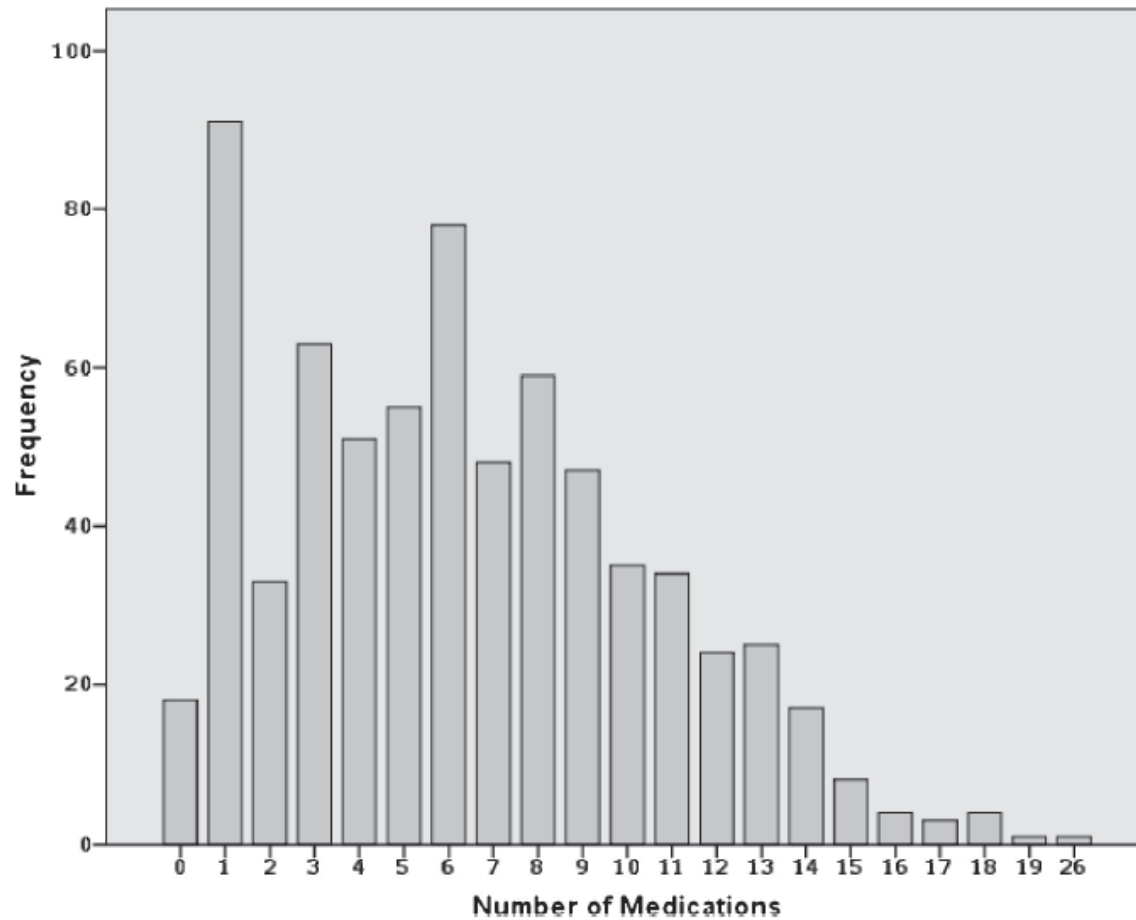


Table 2. Logistic regression analysis

Variable	OR	95%CI of OR	p-value
Age	0.97	0.93–1.02	0.278
Female Gender	1.78	0.80–3.98	0.158
Serum creatinine	0.87	0.61–1.24	0.432
Polypharmacy	5.89	1.74–19.90	0.004

OR = Odds ratio. CI = Confidence interval

Table 3. Details of ADEs

Age & gender	Class	Suspected medication	ADE
80 M	antiplatelet	aspirin	renal dysfunction
78 F	antiplatelet	aspirin	renal dysfunction
69 M	antiplatelet	cilostazol	lower gastrointestinal bleeding
82 M	antiplatelet	sarpogrelate	liver dysfunction
81 M	anticagulant	warfarin	gastric mucosa injury
85 F	anticagulant	warfarin	cerebral bleeding
74 M	antiplatelet, anticoagulant	aspirin, warfarin	gastrointestinal bleeding
75 F	antiplatelet, anticoagulant	ticlopidine, warfarin	gastric ulcer bleeding
85 F	benzodiazepine	brotizolam	weakness
68 F	benzodiazepine	loflazepate, diazepam, flunitrazepam, triazolam	nausea
88 F	benzodiazepine	etizolam	auditory hallucination
75 F	benzodiazepine	brotizolam	altered mental status
79 F	Chinese herbal medicine	Bupleuri radix	interstitial pneumonitis
73 F	Chinese herbal medicine	licorice	hypokalemia
91 F	Chinese herbal medicine	licorice	edema, hypokalemia
79 F	NSAIDs	celecoxib	nephrosis
78 F	NSAIDs	meloxicam	gastrointestinal bleeding
79 M	NSAIDs	loxoprofen	gastric ulcer
91 F	digitalis	digoxin	congestive heart failure
91 F	digitalis	digoxin	congestive heart failure
78 M	opioid analgesic	oxycodone	urinary retention
78 M	opioid analgesic	oxycodone	constipation
74 M	beta-adrenergic receptor blocker	bisoprolol	sick sinus syndrome
75 M	beta-adrenergic receptor blocker, antihypertensive	bisoprolol and/or nifedipine	nausea
90 F	diuretic	furosemide	cerebral infarction
77 M	antihypertensive, diuretic	nifedipine, furosemide	hypotension
74 F	antineoplastic	gemcitabine	nausea
85 F	antineoplastic	tegafur, gimeracil, oteracil	loss of appetite
86 F	antibiotic	azithromycin	liver dysfunction
76 M	anticholinergic	solifenacin	ileus
69 M	antipsychotic	unknown	ileus
86 M	beta-adrenoceptor agonist inhaler	procaterol inhaler	congestive heart failure
70 F	immunosuppressant	tacrolimus	hyperglycemia
69 M	steroid	prednisolone	diabetes



医療における “賢明な選択”を 目指して



CHOOSING
WISELY
JAPAN



徳田顧問の話を聞く横倉会長(左)

BOHEMIAN POLYPHARMACY



Mortality



Falls



Disability



Frailty



No. of medicines

If you've been diagnosed with
polypharmacy, don't you worry.

We've got a pill for that.



Oh, you must work in a hospital too

Original crude med-ecard humor
from The Happy Hospitalist Blog

