



The Hydra of Multimorbidity

Confronting the Many-Headed
Adverse Effects of Wrong
Medication in a Geriatric Patient

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Case History

- Mr A
- 73 years
- Retired clerk from Piliyandala
- Living with his wife, and daughter
- Admitted to the orthopaedic ward following a fall and right sided hip fracture



- Diagnosed patient with type 2 Diabetes mellitus, hypertension, dyslipidaemia and Idiopathic Parkinson's disease
- Follow-up: GP. Poor adherence to medication until recently; does not visit the GP regularly
- Poorly controlled Parkinson's symptoms: recently Benzhexol started by the GP

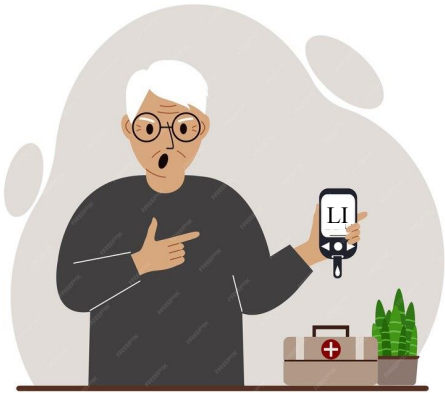
- Few weeks ago: wife had a minor stroke. Daughter moved in with her parents to help them with their daily tasks
- Days later: Patient had a fall and right hip pain
- Taken OTC medication for pain; was unable to walk
- Following day: Found unconscious by daughter early in the morning; admitted to the casualty medical ward
- Major hypoglycaemia + X-ray: Right sided neck of femur fracture



- Drugs:
 - Atorvastatin 20mg nocte
 - Losartan 50mg bd
 - Metformin (SR) 500mg daily
 - Gliclazide 40mg bd
 - Syndopa 275mg ½ tablet 5 times daily
 - Syndopa CR 250mg ¼ tablet nocte
 - Trihexyphenidyl hydrochloride (Benzhexol) 2mg bd

Comprehensive Geriatric Assessment

- **“Multidisciplinary diagnostic and treatment process that identifies medical, psychosocial, and functional limitations of a frail older person in order to develop a coordinated plan to maximize overall health with aging”**
- Significantly improves ADL and QOL in both acute, chronic and community settings
- Reduces readmission and hospital visits in the chronically ill



Major Hypoglycaemia

- Benzhexol: Dry mouth > LOA
- Over the counter NSAID > Further loss of appetite
- Hip fracture
- Delirium
- Inappropriate polypharmacy

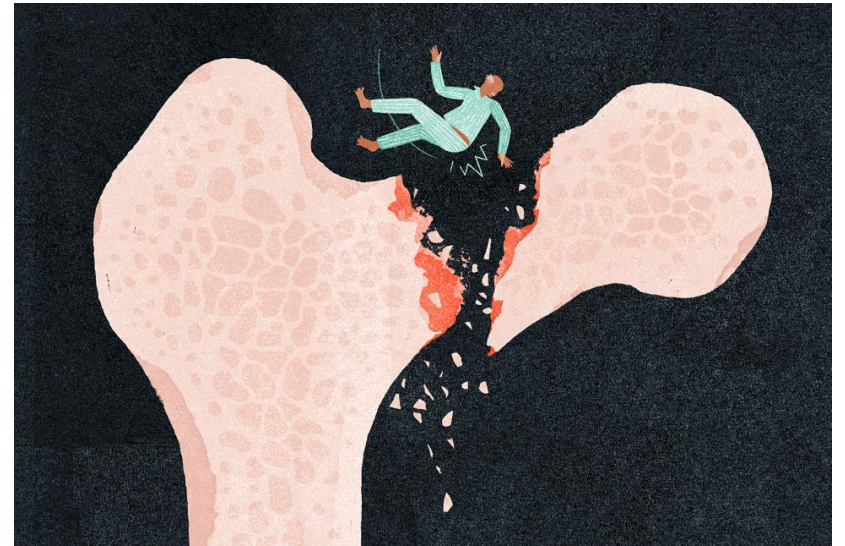
- Patient had poor adherence to medication until recently
 - Episodes of minor hypoglycaemia
 - Lost trust in Parkinson's medications due to poor symptom relief
 - Difficult drug regimen
 - Adverse effects of benzhexol
- Wife had a minor stroke recently and daughter moved in with her parents about a month ago: Patient's drug adherence was supervised by the daughter and drastically improved

Fall

- Many unattended intrinsic and extrinsic risk factors
- Possible hypoglycaemia
- Delirium
- Parkinsonism
- Other factors identified in the CGA: Poor vision, sarcopenia, postural hypotension, few environmental risk factors

- Long standing poorly controlled diabetes
- Old age
- Low BMI

- Fragility fracture



Delirium

- At home, while on benzhexol
- Hypoactive delirium during the orthopaedic ward stay: Multiple risk factors/ unattended needs
 - Unfamiliar environment/ faces
 - Pain
 - Tubes and cannula
 - Poor mobility



Poorly Controlled Parkinson's Disease

- Reasons for poor control of Parkinson's disease
 - Early morning troublesome symptoms (Inadequate night dose)
 - Timing of Syndopa: 4am, 8am, 12pm, 4pm, 8pm
 - Meals/ milk with medication
 - Poor adherence
 - Possible background mild cognitive impairment (missed doses)

- Treatment given: Benzhexol

Benzhexol

- Potentially Inappropriate Medicine (PIM) according to the American Geriatric Society (beers criteria)
- Potentially Inappropriate Prescriptions for persons over 65 years of age according to Screening Tool of Older Person's Prescriptions)
STOPP

Important Adverse Effects

- Delirium
- Long term use: Dementia
- Constipation
- Urinary retention
- Dry mouth
- Postural hypotension

ANTICHOLINERGIC SIDE EFFECTS



Hot as a hare



Dry as a bone



Blind as a bat



Red as a beet



Mad as a hatter

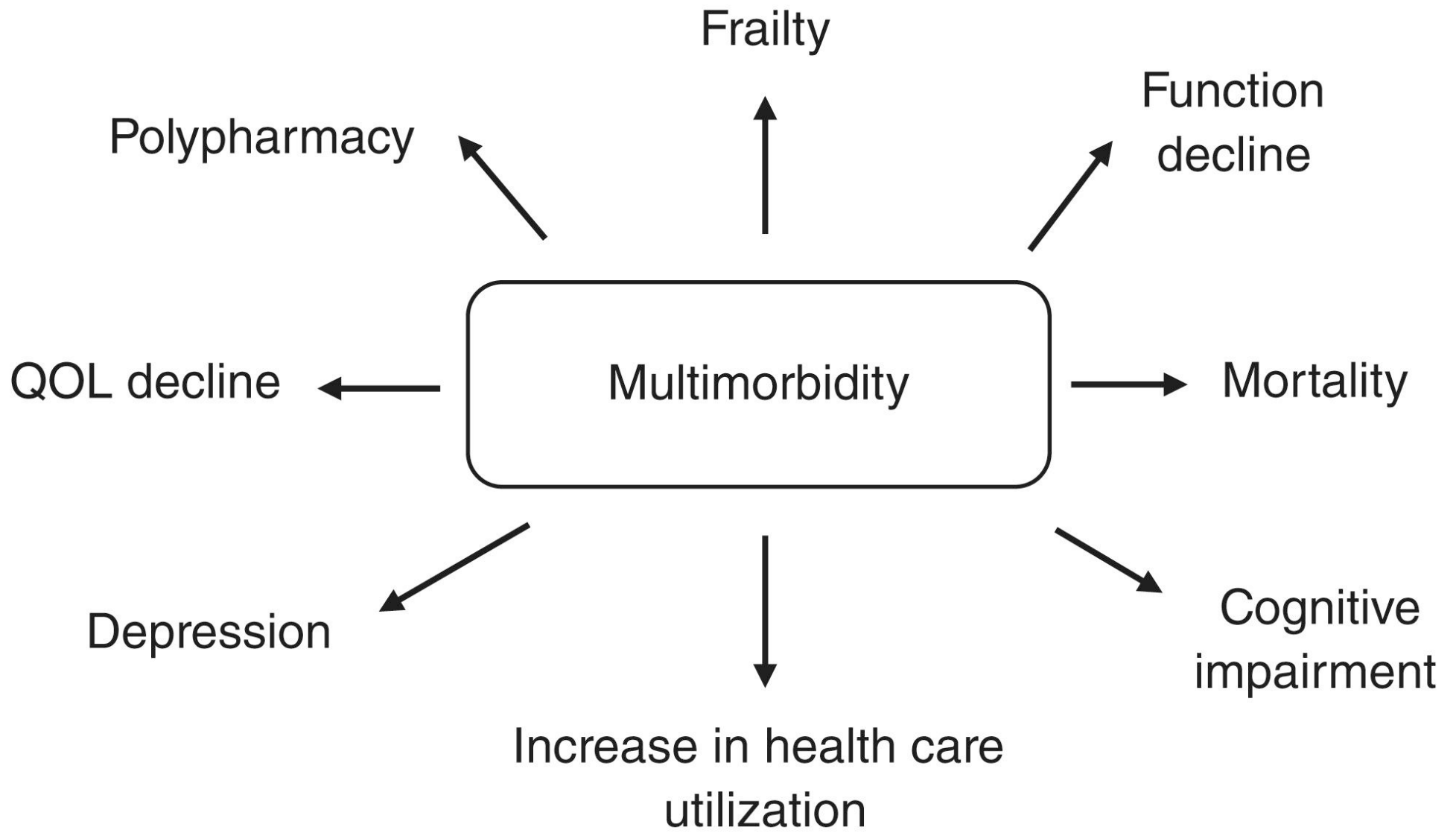
Other Problems

- Polypharmacy
- Significant functional limitation
- Anticipated challenges during rehabilitation
- Possible background cognitive impairment
- Home infrastructure
- Caregiver burden



Multimorbidity

- Two or more chronic conditions that collectively have an adverse effect on health status, function, or quality of life and that require complex healthcare management, decision-making, or coordination
- 34% over 65 years; 50% over 74 years



Managing Multimorbidity in the Elderly

- Patient-centred assessment
 - Comprehensive geriatric assessment
 - Patient's care goal
- Diagnosis-centred assessment
 - Consider medical conditions as well as frailty, fall risk, QOL, and ADLs
- Medication-centred assessment
 - Reassess the indication of each medication
 - Consider non-pharmacological approaches
- Agreed therapeutic plan

Management of Mr A

- Discussion and goal setting
- Comprehensive assessment
- Pre-operative optimization
- Management of Delirium
- Hip fracture: Surgery done
- Treatment for osteoporosis planned

- Antidiabetic medication adjusted
- Patient/ caregiver education regarding Parkinson's disease
- Benzhexol stopped
- Levodopa timing adjusted: 7am, 10am, 2pm, 6pm
- Levodopa, protein rich meal interaction explained
- Night long-acting dose increased

- Eye referral: for cataract surgery
- Physiotherapy: Sarcopenia, fall risk modification, Parkinson's disease
- Home visit planned by the occupational therapist/ SSO
- Care giver burden addressed
- Follow-up plan with symptom diary



Multidisciplinary Input!

AGENDA

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“The secret weapon when it comes to caring for older people”

Importance of MDT

- bring together different skills and expertise
- Core to successful comprehensive geriatric assessment
- Improves patient outcome and experiences
 - Significantly reduces functional decline with better ADL outcomes
 - Improves mental health
- Prevents hospital readmission, reduces A&E attendance and reduces length of hospital stay
- Improves continuity of care

Summary

- Multimorbidity
- Comprehensive geriatric assessment
- Management of Multimorbidity
- Importance of a multidisciplinary approach

Thank you!

