Presentation title: Older people and Heart failure (with a bit of Frailty)

Speaker: Janine Beezer – Advanced Clinical Pharmacist - Heart Failure. Sunderland Royal Hospital

Conflicts of interest: Nil
Should we treat old people differently?

- Heart failure
- Old people
- Drug therapy
- Case
Remember!

• Go low

• Go slow

• Don’t let go!
What do we know about Heart Failure in older people?

Ave Age 78
Median 80.4
67% > 75 years
32% > 85 years

Age independent risk factor mortality elderly HF patients

4.8% compared 12%
1. National Heart Failure Audit 2014/15

Multi-morbidity
50% pts over 75 >3 co-morbidities

Polypharmacy
50% pts over 80 >5 meds

What do we know about older people?

Poorer organ function

Increased risk ADRs

1. National Heart Failure Audit 2014/15
Body systems lose built in reserves

High prevalence and worse outcomes
Pharmacokinetics

(What body does to a drug)
Absorption
Distribution
Metabolism
Excretion

Pharmacodynamics

(What drug does to body)

Frailty

What do we know about Medication in older people?

Poorer organ function

Change response receptor stimulation
Reduced homeostasis mechanisms
Reduced total body water
Reduced lean body mass
Increased adipose tissue
What do we know about Medication in older people?

### Distribution
- **Water soluble**
  - Perindopril
  - Lisinopril
  - Metoprolol
- **Lipid Soluble**
  - Carvedilol
  - Digoxin
  - Ramipril
  - Enalapril
  - ARBs
  - ARAs
  - Ivabradine

### Metabolism

### Absorption

### Excretion
Pharmacokinetics
(What body does to a drug)
Absorption
Distribution
Metabolism
Excretion

Pharmacodynamics
(What drug does to body)

What do we know about Medication in older people?

Poorer organ function
Change response receptor stimulation
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Frailty
• Heart failure
• Old people
• Drug therapy
• Case
Multi-morbid
5 co-morbidities

Polypharmacy
12 medications

Poorer organ function
Likely

Increased risk ADR’s
likely

Mavis
Admitted to Hospital from clinic

Symptoms
- Feels terrible
- Poor oral intake
- Confused
- Lethargic
- Denies SOB

Examination
- Looks frail washed out
  - HS – Normal
  - Chest clear
  - JVP ↔
  - No peripheral oedema
  - BP 128/71
  - HR 58
  - ECG – NSR
  - Severe LV impairment EF 18%

Medication
- Bisoprolol 7.5mg od
- Candesartan 16mg od
- Spironolactone 12.5mg od
- Furosemide 40mg om
- Lansoprazole 15mg om, Alendronic acid 70mg weekly, Adcal D3, Apixaban 2.5mg bd, Levothyroxine 25mcg om, Paracetamol 1g qds, Docusate 100mg bd, Visctoears eye drops

Bloods
- Hb 116 G/L
- Na **111** mmol/l
- Ur 4.3 mmol/l
- Cr 95 μmol/l
Time line

June 16 (3 weeks)
- Admitted #NOF
- ECHO performed as part of pre-surgery work up
- Prolonged stay and difficult rehabilitation
- Discharged to rehab facility
- Candesartan 16mg od, Bisoprolol 5mg om

August 16 (10 days)
- Generally unwell, hypokalaemia, fluid overload, AF
- Given IV furosemide, b-blocker increased, anticoagulated
- Discharged on Candesartan 24mg od, Bisoprolol 7.5mg od, Furosemide 80mg bd, Eplerenone 25mg od + others
- Na 137, K+ 3.6, Ur 4.8, Cr 83
- Seen heart failure team on admission and referred for follow up with geriatrician specialises heart failure

September 16 (1 day)
- GP referred to GP assessment ward with hyponatraemia
- Na 123
- Reviewed and discharged with a reduced dose of furosemide 80mg od as euvolemic.

September 16 (1 day)
- Chest pain and hyponatraemia
- Na 113
- Discharged with increased dose Furosemide 80mg bd, Candesartan reduced to 12mg and Eplerenone changed to Spiro 12.5 (reduced dose)
- Heart failure clinic appointment in 3 days.
Symptoms
- Feels terrible
- Poor oral intake
- Confused
- Lethargic
- Denies SOB

Examination
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- HS – Normal
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Bloods
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- Ur 4.3 mmol/l
- Cr 95 μmol/l

5 Week admission
Pharmacokinetics

Pharmacodynamics

Polypharmacy + Increased risk ADRs

Frail + Multimorbid + Poorer organ function
Symptoms
- No confusion
- Independent ADL
- Eating and drinking well

Examination
- Frail
- HS – Normal
- Chest clear
- JVP ↔
- No peripheral oedema
- BP 108/53
- HR 70
- ECG – NSR
- Severe LV impairment EF 18%

Medication
- Bisoprolol 2.5mg od
- Candesartan 2mg od
- Furosemide 40mg om
- Lansoprazole 15mg om, Alendronic acid 70mg weekly, Adcal D3, Apixaban 2.5mg bd, Levothyroxine 25mcg om, Paracetamol 1g qds, Docusate 100mg bd, Viscotears eye drops

Bloods
- Hb 108 G/L
- Na 132 mmol/l
- Ur 8.1 mmol/l
- Cr 70 μmol/l

Discharged from hospital – own home!
Summary

• Should elderly Heart Failure patients be treated differently?
  • Still have ABBA
  • Start low
  • Go slow
  • Monitor regularly – retain in clinic – Don’t let go
  • Multidisciplinary working
  • Be mindful other conditions such Frailty me have bigger impact on outcomes.