Psychiatric Disease and Drugs
Their Effect on the Heart

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Ms A aged 40

Schizophrenia with difficult control

- Treatment
  - Clozapine
  - Risperidone
  - Lorazepam
  - Benztropine

- Heavy smoker with COPD
- Collapsed 7 years ago ?seizure
- Felt dizzy, faint, collapsed
- Sudden Cardiac Death a few weeks later
ECG
Long QTc = QT/VR-R
Torsades de Pointes
Antipsychotics

• Typical
  – Haloperidol
  – Thioridazine

• Atypical
  – Clozapine
  – Olanzapine
  – Quetiapine
  – Risperidone
Adjusted Incidence-Rate Ratios for Sudden Cardiac Death among Current Users of Antipsychotic Drugs, According to Type of Drug and Dose

Adjusted Incidence-Rate Ratios for Sudden Cardiac Death among Current Users of Six Frequently Prescribed Antipsychotic Drugs, According to Dose

Sudden Cardiac Death with Atypical Antipsychotics

• Mechanisms with Clozapine
  Early
  • myocarditis 1: 10,000 to 1: 500
  Late
  • Cardiomyopathy 1 per 2000 patient years
  • Long QTc
• Risk of QT prolongation on Risperidone and Quetiapine
  – 3% general population
  – 6% with dementia (mean age 78)
Atypical Antipsychotics
Risk of Adverse Events

Low dose
2.9 events/1000 patient years

High dose
3.3 events/1000 patient years
LONG QT
Practical Considerations

• Ensure electrolytes are normal (K, Mg, Ca)
• Reduce dose or use an alternative where possible especially in the elderly
• Avoid other drugs that prolong QT
  (ADHB Long QT site)
  – Macrolide antibiotics
  – Antifungals
  – Decongestants, terfenadine, diphenhydramine
  – Adrenalin
  – Liquorice
Mrs B

• Severe hypertension
  – CVAs 1998, 2010 (L hemiparesis)
  – CT scan chronic small vessel disease with lacunar infarcts

• On ERT post BSO 1982 (Ca Cervix)

• No chest pain but SOBOE and nocturnal clammy episodes with nausea and pressure in L arm

• Strongly positive stress test

• No significant carotid artery disease
Mrs B
Mrs B

June 2011 CABG

• Day 4 post op R MCA CVA
• Post pericardiotomy syndrome
• Intensive rehabilitation with a good recovery from the stroke
• Continued chest wall hypersensitivity
Mrs B

October 2011 - Reactive Depression

- Low mood with poor motivation and sense of hopelessness
- Stopped her exercise
- Anorexic
- Deterioration in speech

• GP review with commencement of escitalopram, titrated to 15mg.
• Clinical psychology further visit
• Speech Language Therapy review
• GLH cardiac exercise programme
Depression Management
Post CHD Event

• US estimate
  – 15 – 20% depression post CHD event
  – 20 – 30% some depressive symptoms

• Mortality increased (6 – 24 months post CHD event) 2 – 2.5x

• Likely mechanisms of adverse outcomes
  – ↓ adherence to Rx, exercise, smoking cessation, dietary improvements, attendance at Cardiac Rehab
  – ↑ inflammatory markers, platelet reactivity, sympathoadrenal activity
Depression Screening Questions
PHQ - 2

1. During the past month have you often been bothered by feeling down, depressed or hopeless?

2. During the past month have you often had little interest or pleasure in doing things?
Treatment of Depression Post CHD Event

• SSRIs preferred to TCIs (safety)
• Preferred agents – citalopram, sertraline
• No evidence of SSRI benefit with mild depression
• Watch QTc, bleeding time and Na with SSRIs
• No evidence of benefit from psychotherapy but clear benefit from Cardiac Rehabilitation classes
• Statins and β-blockers do not increase depression (β-blockers may increase fatigue and sexual dysfunction)
Mrs C

• 34 y.o. woman with obsessive compulsive disorder managed with clomipramine
• Severe peripartum cardiomyopathy
  – Acute renal failure
  – Ischaemic toes
  – Prolonged convalescence
• Residual moderate cardiomyopathy
• Recurrence of OCD
Tricyclic Antidepressants with Heart Disease

- Limited clinical trial data
- Tricyclics potentially increase proarrhythmic events post MI
- Likely dose related effect
- In CHF
  - Less adverse interaction with Beta-blockers than SSRIs
  - Lower mortality in 1 trial with TCAs than SSRIs
  - Citalopram and sertraline less adverse ß-blocker interaction than fluoxetine and paroxetine