Current Management of Coronary Artery Disease with Special Emphasis on the Elderly and Diabetic

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Diagnosis

- Clinical history (subjective)
- Non invasive testing (objective)
  - Exercise stress ECG/Echo (functional)
  - CT coronary angiogram (anatomical)
- Invasive testing (definitive)
  - Coronary angiogram and Intravascular ultrasound (anatomical)
  - Pressure wire to measure the coronary flow reserve (functional)
Treatment goals

- Relief of symptoms (quality of life)
- Improvement of prognosis in LMS disease and 3VD with an LVEF<40% (quantity of life)
- Operative risk reduction for major non cardiac surgery (e.g. AAA repair, spinal fusion)
Treatment options

- Drug therapy (palliative)
- Percutaneous coronary intervention (definitive)
- Coronary artery bypass grafting (definitive)
Drug therapy

- Beta-blocker
- Calcium channel blocker
- Nitrate (oral and sublingual)
- ACE inhibitor, Aspirin and Statin
Percutaneous Coronary Intervention
Different Sizes and Lengths
Coronary Artery Bypass

Aorta

Internal mammary artery bypass

Cholesterol build-up

Sites of Blockage

Saphenous vein bypass

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The Elderly

- Co-morbidity and often with advanced CAD on presentation (problematic)
- Less tolerance to ischemia (repeated hospitalizations)
- Poly-pharmacy (drug interactions and intolerance)
- Often under investigated and treated
- Maintenance of independence (self confidence)
- Quality of life is particularly important (limited life span)
The Diabetics

- High incidence of CAD often with advanced diffuse disease at the time of diagnosis (the fact)
- Often insidious (silent ischemia)
- Atypical presentations (exertional breathlessness)
- Poor correlation between symptom/non-invasive testing and the extent of coronary disease (false assurance)
- Early diagnosis and definitive treatment are therefore mandatory (prognostic reason)
Patient History and Diagnostic Testing

- Mr. JG aged 83 years old had had a anterior MI 32 years ago and in 2007 PCI (Bare metal stent) to his proximal RCA following a good history of effort angina and a positive ESE (preserved LV function)

- Presented in 2011 with a 6 month h/o exertional breathlessness associated with an usual sensation arising from the epigastrium to the upper chest, similar to his 2007 presentation
RCA LAO
Discussion

1. Drug therapy

2. Percutaneous coronary intervention

3. Coronary artery bypass grafting
Clinical justification for approach

- Patient was totally free of symptoms following PCI to RCA in 2007

- Patient is reluctant to take more medication as PCI had worked in the past

- Patient is reluctant to have CABG in view of his advanced age and risk of stroke

- PCI to RCA is technically achievable and is what the patient preferred (partial revascularization)
Identified Procedural or Anatomical Challenges

- Tortuous vessel
- Heavy calcification
- Long disease segment
- Severe LCA disease (limited reserve)
- Advanced age though without significant co-morbidity (patient selection)
Equipment

- 7 F JR4 guide via R femoral artery
- 5 F Pacing wire to RV via R femoral vein
- Floppy rotablator wire and a 1.5 mm blur
- Finecross MG microcatheter
- 0.014 BMW wire
- 6 F Guideliner
Rotablation
1.5 mm Burr
Post Rotablation
Balloon Angioplasty
3.0x15 mm NC Quantum Apex balloon
Stenting (Guideliner support)
3.5x38 mm Resolute Integrity DES
Post dilatation
4.0x20 mm NC
Quantum Apex balloon
Post dilatation
Pre and Post PCI to the RCA
Take home messages

- Low threshold to refer patients with chest pain for full cardiac assessment especially diabetics
- Coronary angiography facilitates management
- Early diagnosis and definitive treatment are mandatory in diabetic patients
- Advanced age is not a barrier to invasive treatment (patient selection)
Management of AF

Dr Albert Ko
Case Presentation

- A 41 years old man who was first diagnosed to have PAF in London in 2002 following frequent episodes of palpitations

- Normal echo apart from mild LA dilatation

- Started on Flecaïnide 100 mg bd and had had no recurrence of palpitations

- Should he continue Flecaïnide for life or ……..?
The dose of Flecainide was reduced to 100 mg daily in 2004 given the good drug response and eventually stopped as his palpitations were mostly nocturnal and not particularly troublesome.

“Pill in the Pocket” with short acting Diltiazem on a PRN basis.
Cont.,

- Review in 2008, might have had taken Diltizem no more than 6 times a year. Happy to continue “Pill in the Pocket”

- Review in 2010, started a very vigorous exercise program and lost 20kg. HR slowed considerably

- Since then, had been getting daily slow erratic heart beats as opposed to what was used to be >200/min. Felt weak and drained

- Competitive cyclist and it does significantly impact on his life style
Cont.,

- Subsequent ECG confirmed PAF

- What to do next?
  - Go back on Flecaïnide (rhythm control)
  - Accept it and take regular Diltiazem (rate control)
  - Others......................
Cont.,

- Back on Flecaïnide from 200 mg and gradually increasing to 400 mg daily with good suppression during day time.

- Continue to have nocturnal AF on holter associated with night sweats.

- What to do next?
Cont.,

- Thoracoscopic left atrial MAZE procedure
- Ablation of ganglionated Plexi
- Amputation of left atrial appendage
- Well on follow up. Gradual weaning off Flecainde. Sinus rhythm on ECG
Clinical justification for approach

- Age (to avoid subjecting young patient to life long drug therapy)
- Resistant to drug therapy
- Quality of life
- Definitive verse palliative
- Percutaneous verse minimal invasive approach
- Risk and benefit