Presentation title: Case History – Travelling with Heart Failure

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Conflicts of interest: Nil to declare

*These presentation slides will be added to www.bsh.org.uk after the meeting.*
Patient Overview

• Julie – 56 year old
  – Anteroseptal MI 2013 with subsequent stents to Proximal and Mid LAD (Jamaica)
  – Angina May 2015 – LHC showed ISR to both stents and diseased diagonal
  – CABG x2 (Off Pump) June 2015
  – Type 2 Diabetes on Insulin
  – Colitis with sporadic diverticular disease on colonoscopy
  – Anxiety associated with illness
**Clinical Status**

- MPS study May 2017 - Low Ischaemic burden
- Echo March 2018 – LVEF 40%, Mild MR, Trivial TR
- No Heart failure admissions since 2016
- Stable bloods
  - Na 137, K 4.8, Ur 6.4, Creatinine 72, NT-pro BNP 104
  - Normal iron levels (Hb 120)

**Clinic Review May 2018**
- BP: 108/70mm/Hg, Pulse 72
- Clinically Euvolaemic
- NYHA Class II

**HF Meds**
- Ramipril 3.75mg AM, 5mg PM
- Carvedilol 50mg BD
- Ivabradine 5mg AM, 2.5mg PM
- Spironolactone 12.5mg OD
Holiday plans

- Santorini Greece for 1 week
  - Travelling with friends and family
  - 4 hour flight
- Clinic review prior to departure
  - Printed Latest clinic letters, blood results, Echo report and ECG
  - Discuss need for robust travel insurance
  - Avoid medication changes unless critical
  - Consider emergency supply of loop diuretic
Choosing your destination and accommodation

- What medical facilities are available
- Is the destination at a high altitude
- What are the weather conditions
- Check with accommodation provider in advance
  - Accessibility to local amenities
  - Location of room in hotel to dining and communal areas
  - Lifts
  - Hotel facilities
  - Ability to help in case of decline in health
Flying with Heart Failure

- BCS Working group 2010 - Fitness to fly with cardiovascular disease
  - Chronic Heart Failure
    - NYHA class I/II – no restrictions
    - NYHA class III – May require in flight oxygen
    - NYHA class IV – Advised not to fly without in flight oxygen +/- Medical assistance
  - Acute Heart Failure
    - Fly after 6 weeks if stabilised and treated

Can we predict those who need supplemental oxygen?
Hypoxic Challenge Test

- Altitude and cabin pressure can be simulated using 15% Oxygen in nitrogen
- Patient breathes the air mixture for 20mins
  - Oxygen saturation monitoring
  - ABG’s
    - Oxygen required in flight if oxygen saturations fall below 85%
- Hobkirk et al 2013
  - NYHA I/II on stable medications tolerate this with no worsening of symptoms for 1hour
Airport

● Leave plenty of time!
● Where possible pick flights at a time when you normally feel well
● Seek assistance to navigate the airport and with boarding the aircraft
● Ensure supply of medications in carry on luggage with expectation of delays
● Pacemakers/ICD’s – Patients should carry ID card and notify security staff of the implanted device
During the flight

- Avoid alcohol and coffee
- Reduce risk of DVT
- Remain calm
  - Breathing exercises
  - Positive imagery
- Alert cabin crew early if you start to feel unwell
While away

● Don’t take a holiday from managing heart failure
  – Maintain fluid restriction
  – Manage salt intake
  – Take your medications including diuretics
  – Don’t ignore worsening symptoms
  – Understand how to monitor peripheral oedema

● Consider impact of time difference on medication regimes

● Pace yourself and enjoy yourself!
Returning home

- Allow time to recover and settle into a routine again
- Check weight as usual
- Contact HF team or GP for review especially if unwell whilst away or if weight has risen
- Reflect on your experience
- Plan your next holiday?
How did Julie find her holiday?

- Outbound flight – no issues encountered
- Time away – Enjoyable and relaxing
  - ‘Just what I needed to help me feel more normal’
- Return flight 😞
  - Issues with transfer to airport meant rushing
  - Flight late in day when feels more fatigued
  - Breathless on flight and felt uncomfortable throughout
- Despite this Julie plans to visit Jamaica later in the year
Other travel options

- **Cruise Ships**
  - Have on board medical facilities
  - Travel to multiple locations without need to move baggage around frequently
  - Lots of facilities on board

- **Train Travel**
  - Don’t need to arrive at station as early if flying
  - Often more access to toilets for those on diuretics
  - Longer journeys can exacerbate fatigue
Souvenirs

- Ischaemic Cardiomyopathy LVEF 15%
- Significant arrythmia burden with VT and ICD shocks
- Advised not fit to travel to daughters wedding in Cyprus

- Returned to UK after a prolonged stay due to ill health with an LVAD!
Thank you – Any questions