**Multimodality Imaging in ACHD and PH**
with implementation of ISACHD protocol

**Day 1 – Thursday 5th September**

- 09:00-09:15 Registration
- 09:15-09:30 Welcome and Introduction

**Session 1: Basic cardiac structure**
- 09:30-09:50 Morphology of the normal heart
- 09:50-10:10 ACHD Echo protocol
- 10:10-10:30 How to perform echocardiography for ACHD patients

**Session 2: ACHD challenges**
- 10:30-10:50 Echocardiographic assessment of LV diastolic and systolic function.
- 10:50-11:10 LV Non-compaction in ACHD
- 11:10-11:30 Echocardiographic assessment of RV diastolic and systolic function
- 11:30-11:50 Exercise echocardiography for ACHD
- 11:50-12:00 Questions

12:00-12:45 Lunch break

**Session 3 Septal defects – Atrial Septal defects (ASD)**
- 12:45-13:00 Morphology
- 13:00-13:15 Echocardiographic assessment using ISACHD protocol for ASD
- 13:15-13:30 Echo assessment for suitability of device closure of ASD
- 13:30-13:45 ASD when it is not so simple I (PAH, Sinus venosus ASD and unroofed coronary sinus), role of CMR.
- 13:45-14:05 ASD when it is not so simple II: Tricks & traps
- 14:05-14:15 Questions

**Session 4 Ventricular Septal defects (VSD)**
- 14:15-14:45 Morphology
- 14:45-15:00 Echocardiographic assessment VSD using ISACHD protocol. 15:00-15:15 Late complications of small VSD
- 15:15-15:30 Questions
- 15:30-15:45 Break

15:45-16:05 Morphology
16:05-16:20 Echocardiographic assessment AVSD.
16:20-16:45 Echocardiographic assessment of repaired AVSD
16:45 - 17:00 Tips and tricks in assessing shunt lesions
17:00 - 17:20 Use of CT in ACHD

**Day 2 – Friday 6th September**

**Session 5 Atrioventricular Septal defects (AVSD)**
- 09:10-09:30 Morphology
- 09:30-09:50 Echocardiography of the coronary arteries in TGA pre ASO
- 09:50-10:10 Echocardiographic assessment of TGA after atrial switch repair.
- 10:10-10:25 Echocardiographic assessment of TGA after arterial switch repair
- 10:25-10:40 Echo assessment of patients post Rastelli repair
- 10:40-10:55 CMR in assessment of TGA including surgically repaired patients
- 10:55-11:10 Questions
- 11:10-11:25 Break

**Session 6 Transposition of the great arteries (TGA)**
- 11:25-11:35 Morphology
- 11:35-12:05 Echocardiographic assessment of ccTGA
- 12:05-12:20 CMR in assessment of CC-TGA
- 12:20-12:35 Subpulmonary LV in systemic RV – does it matter?
- 12:35-12:45 Questions

12:45-13:30 Lunch break

**Session 7 Congenitally corrected transposition of the great arteries (ccTGA)**
- 13:30-13:45 Morphology
- 13:45-14:10 Echo assessment of LV inflow abnormality
- 14:10-14:30 Echocardiographic assessment LV outflow tract lesions
- 14:30-14:50 CMR assessment
- 14:50-15:00 Questions

**Session 8 Disease of the left ventricular inflow and outflow tract (including sub-AS, valvar AS, supra-AS and CoA)**
- 13:30-13:45 Morphology
- 13:45-14:10 Echo assessment of LV inflow abnormality
- 14:10-14:30 Echocardiographic assessment LV outflow tract lesions
- 14:30-14:50 CMR assessment
- 14:50-15:00 Questions
Session 9 Congenital tricuspid valve abnormalities (Ebstein anomaly of the tricuspid valve)
15:00-15:10 Morphology
15:10-15:30 Echocardiographic assessment using ISACH protocol
15:30-15:50 Congenital TV abnormality and treatment options
15:50-16:05 CMR assessment of Ebstein anomaly
16:05-16:15 Questions

Session 10 Tetralogy of Fallot
16:15-16:30 Morphology
16:30-16:45 Echocardiography for Tetralogy of Fallot +/- PA
16:45-17:05 Echocardiographic assessment post ToF repair
17:05-17:20 Post ToF repair – what CMR can offer
17:20-17:30 Questions

Day 3 – Saturday 7th September

Session 11 Physiologically Univentricular heart
09:00-09:20 Morphology
09:20-09:35 Echocardiographic assessment
09:35-09:55 Echocardiographic assessment of the adult patient post Fontan repair
09:55 -10:10 CMR in assessment of cardiac anatomy and surgical results.
10:10 -10:20 Questions

Session 12 ACHD with pulmonary hypertension including ES
10:20-10:35 Morphology
10:35-11:05 Echocardiographic assessment, 11:05-11:25 3D Assessment of RV function
11:25-11:45 CMR in ACHD PH
11:45-12:00 CT in ACHD PH
12:00-12:15 Questions
12:15-13:00 Lunch Break

Session 13 ACHD challenges
13:00-13:15 Echocardiography for endocarditis assessment
13:15-13:30 Echo assessment of ACHD during Pregnancy
13:30-13:50 Congenital coronary artery abnormalities
13:50-14:10 Echocardiographic assessment of pericardial effusion, constriction and restriction in ACHD.
14:10-14:30 Pacing & Optimisation in ACHD

Session 14 Hands-on
14:30-16:30 Live scanning session in small groups with patients and instructors. Also available are workstation based tutorials on post processing including 3D and speckle tracking, strain and strain rate analysis.

Registration:
Registration for 3 days (includes hands-on session): Strictly limited places
Registration for lectures only (2.5 days)
Website: www.rbht.nhs.uk/morphology
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