

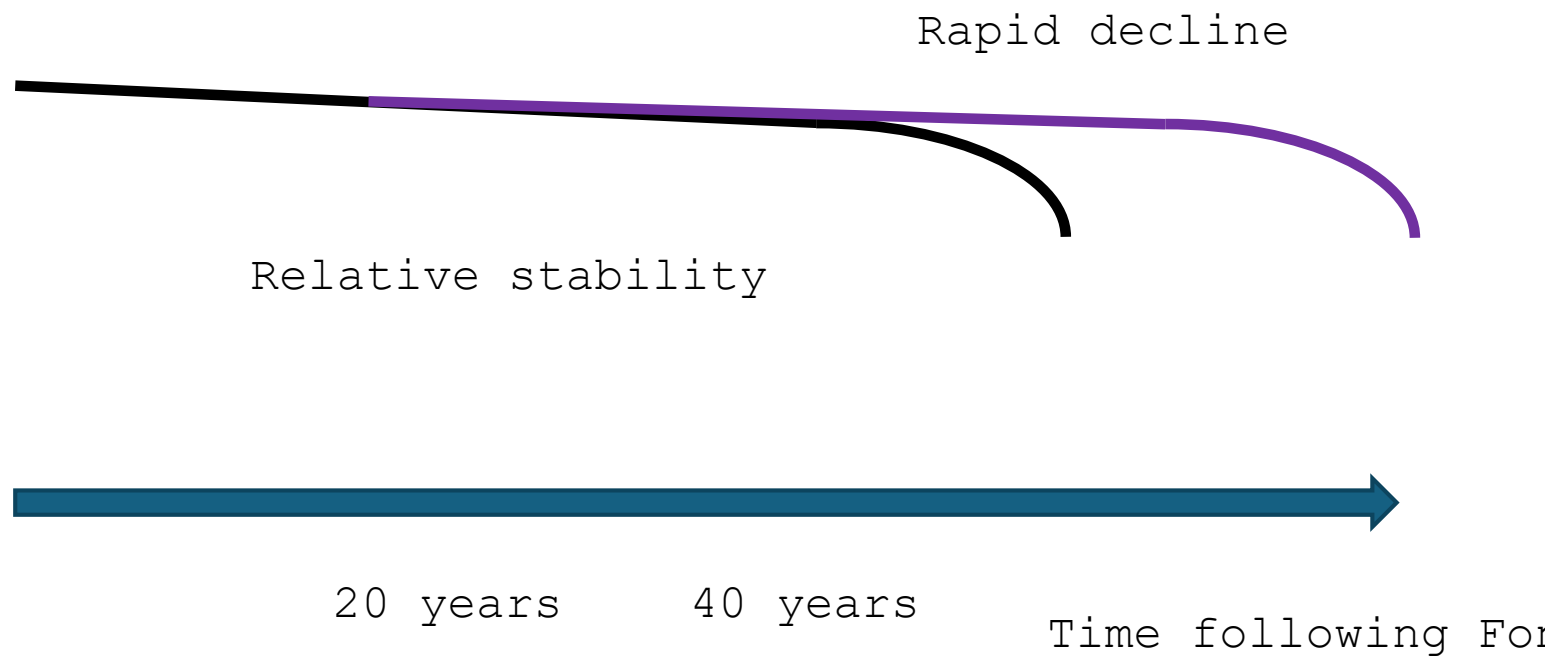
Fontan clinic discussion

LHM Medical Symposium September 2024

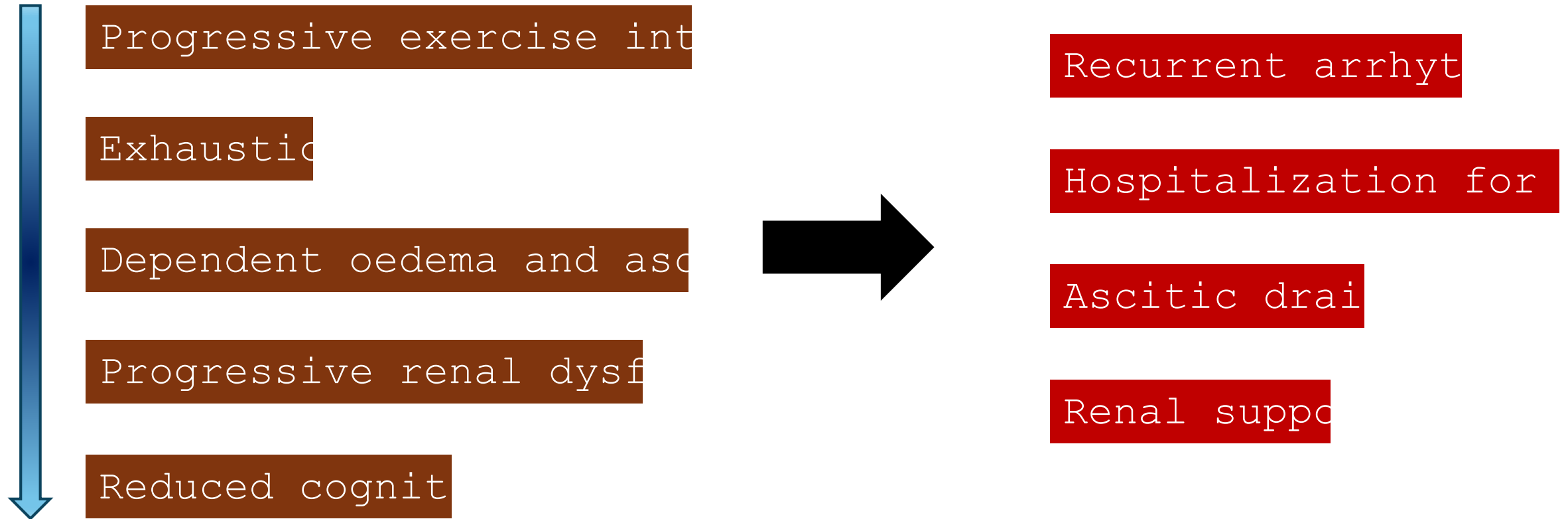
Dr Paul Clift

QEHB

Characteristics of the Fontan



Characteristics of the failing Fontan



Fontan: a
multisystem
disorder

Liver

Renal

Bone

Endocrine

Mental health issues

Premature aging

Routine Fontan surveillance

What we do

Timing	Assessment
Age 12–16	<p>Transitional process begins with introduction to adult service:</p> <ul style="list-style-type: none"> • Education around nature of heart condition • Lifestyle advice — sports, alcohol, tobacco, sexual health, drug use • Dental advice • Sports advice • Employment advice • Pregnancy and contraception <p>Possible formal evaluation with cardiac catheterisation and optimization as necessary</p>
16–18 years	<p>Transition of care to adult services Full baseline assessment as below</p>
All ages — annual	<p>Clinic review and examination 12 lead ECG Blood investigations:</p> <ul style="list-style-type: none"> • Renal, liver, thyroid function, bone profile • Full blood count, iron studies, clotting, HbA1c • Vitamin D • NT-proBNP/BNP <p>Liver investigations:</p> <ul style="list-style-type: none"> • Fibrosis assessment — enhanced liver fibrosis score/fibroscan • Liver ultrasound scan • Alpha fetoprotein <p>Echocardiography</p>
All ages at routine interval	<p>Cardiac MRI Cardiopulmonary exercise testing</p>
As required	<p>Cardiac catheterization — pressures, pathway assessment, collaterals ± intervention as necessary Liver imaging — contrast enhanced MRI or Triple phase CT Lung function testing Prolonged ECG monitoring if symptomatic</p>

What we
don't do

Provide psychological support

No physiotherapist

No social worker

No exercise physiologist

Not all one stop clinic

Routine Fontan surveillance

Birmingham Experience

1000th Fontan completed in
2023

Program started in 1988

Norwood programme since
1992

87 APC

34 Lateral Tunnel

>850 EC-TCPC

Routinely fenestrated

Approximately half cohort
HLHS

Adult experience

More than 400 transitioned

Around 25% HLHS

40 deaths since 2000

27 live births in 24 women

9 transplants - heart only
- 3 perioperative and 1
late deaths

10 TCPC Conversions - 2
death

8 open reoperations - 1
death

HLHS outcomes

>100 adults

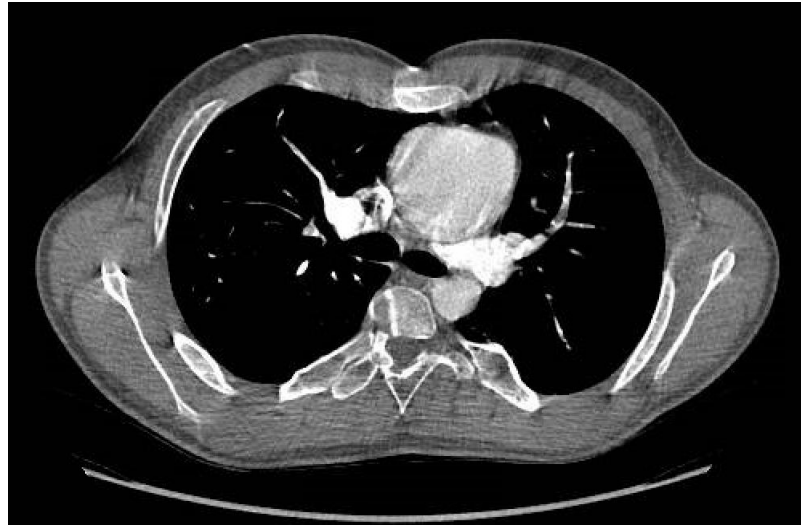
no deaths

no
transplantation

no pregnancy

high
intervention
rate

17 year old HLHS Fontan
Expanding Damus extending to proximal arch
(53 x63mm) compressing LPA & moderate neo-aortic
incompetence



Surgical management with Carell patch repair and 25mm Carboseal va
conduit replacement of dilated Damus and proximal arch under DH

Fontan
service –
not just
the
clinic

Cardiologists

Cardiac
surgeons

Complex aortic
service

Specialist
obstetric
service

Clinical
psychology

Liver medicine

Cardiac
transplantation
service

Nurse
specialists

Discussion points



What does an ideal clinic look like?



What personnel make up the ideal Fontan team?



What data should be routinely collected?



How to maintain a positive patient experience and engagement?