



Clinical guideline: To help determine where children with congenital heart disease undergoing any non cardiac procedure under general anaesthesia or IV sedation should be looked after

Guidance

The purpose of this system is to facilitate communication between anaesthetic, cardiology and clinical teams to ensure that patients receive optimal perioperative care for general anaesthesia or iv sedation.

This guidance has been made in conjunction with RHC (Glasgow), RHCYP (Edinburgh), Aberdeen Children's Hospital and Tayside Children's Hospital. Whilst the guidance primarily applies to the hospitals mentioned, some conditions in the "good to go" category are applicable to all hospitals throughout Scotland that look after children and young persons under the age of 16. Guidance applies to elective patients. If over the age of 16, please contact your local adult cardiac services in the first instance.

Where doubt exists, it is advisable to discuss a case in good time with a cardiac anaesthetist as per details below.

Out of hours or emergency cases can be discussed with cardiac anaesthetists as per details below.

Acronyms

AV valve	Atrioventricular valve
BT shunt	Blalock-Taussig shunt
P/CAVSD	Partial/Complete atrioventricular septal defect
CHD	Congenital heart disease
FS	Fractional shortening
MAPCA	Major aortopulmonary collateral artery
PA	Pulmonary artery
PICU	Paediatric intensive care unit
PDA	Patent ductus arteriosus
RV	Right ventricle
RVOTO	Right ventricular outflow tract obstruction
TCPC	Total cavopulmonary connection
TGA	Transposition of the great arteries
VSD	Ventricular septal defect



HIGH RISK CASES: SHOULD BE DONE IN A CARDIAC CENTRE

(note some exclusions for Edinburgh to be discussed on individual case basis as needed)

- Univentricular heart prior to Glenn procedure (including children with BT or Sano shunt or a PDA stent or patients with bilateral PA bands)
- Other Cyanotic congenital heart disease prior to complete repair e.g. spelling Fallot's
- Pulmonary atresia+VSD+MAPCAs – prior to satisfactory correction
- Severe Ebstein's anomaly
- Severe cardiomyopathy requiring induction of anaesthesia (e.g. Hickman line in / out) or ventilated on PICU - e.g. FS < 10%, &/or on inotropic support &/or admitted acutely &/or ventilated (may already be managed in Edinburgh by PICU team)
- Pulmonary hypertension (at least half-systemic PA pressure) including patients on multiple systemic medical therapies such as prostacyclin (enteral or parenteral)
- Patients with William's syndrome or other elastin gene-variant related vascular disease and associated systemic or pulmonary arterial stenosis prior to repair. (Those that have been fully investigated **and** have had at least one entirely uneventful GA at RHC, maybe suitable for anaesthesia in other centres – discuss on individual case basis)
- Neonates with a prostin-dependent circulation
- Temporary pacemaker dependence following cardiac surgery
- Ventricular arrhythmias related to long-QT syndrome, Brugada or catecholaminergic polymorphic ventricular tachycardia (team in Edinburgh may be happy looking after some of these patients)
- All neonates or infants who have been listed for cardiac surgery



GOOD TO GO: No need routinely to discuss. Referrals for discussion and/or advice are absolutely welcome. First port of call would be local children's hospital

All DGHs

- Corrected PDA / ASD / VSD / coarctation
- Asymptomatic uncorrected ASD/PFO, small VSD
- Mild pulmonary stenosis

Aberdeen Children's Hospital, Tayside Children's Hospital, RHCYP, RHC

- PAVSD / CAVSD (satisfactory biventricular repair and good function)
- TGA post-repair with no residual haemodynamically significant lesions
- Corrected Fallot's tetralogy with good functional status (even if there is moderate to severe pulmonary valve regurgitation)
- Repaired pulmonary atresia or Truncus Arteriosus with good functional status, normal heart function and a satisfactory RV to PA conduit (even in the presence of pulmonary regurgitation)
- SVT controlled on medical treatment

ALL OTHER PATIENTS: any patient that falls out with these groups can be discussed on an individual basis with the preassessment team in Glasgow.

Contact details Royal Childrens Hospital, Glasgow

Elective cases/non-urgent email: ggc.preassessmentpaedsconsultants@nhs.scot

Urgent cases: Mon-Fri 8am - 5pm - advice via duty consultant 0141 4524842

Out of hours - on-call paediatric cardiac anaesthetist via switchboard 0141 2010000

Or junior anaesthetic resident 0141 4524342 who will contact the

relevant anaesthetist

References

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