

**HOST-CHS assessment tool – Double Inlet Left Ventricle with TGA and AoA hypoplasia**

\*This is one method of performing the repair\*

Steps		YES/ NO		Weight of step (1-5)	Included in HOST-CHS Holistic Score	
<b>1</b>	<b>Control of the Patent Ductus Arteriosus (PDA)</b>					
	1	Has the PDA been ligated?	Y	N	2	KNOWLEDGE
	2	Is the tie >3mm above the origin of the left pulmonary artery (LPA) [avoiding potential LPA stenosis]?	Y	N	3	RESPECT
<b>2</b>	<b>Isolation of the aortic and pulmonary roots</b>					
	3	Has the aorta been transected approximately 3-5mm above the sinotubular junction?	Y	N	4	KNOWLEDGE
		Is the cut on the aorta:				
	4	i) Clean? (i.e. not jagged or having sharp protruding points)	Y	N	3	RESPECT
	5	ii) Avoids damaging the aortic valve?	Y	N	5	RESPECT
	6	Has the main pulmonary artery (MPA) been transected?	Y	N	3	KNOWLEDGE
	7	Has the MPA been divided at the same level as the aortic transection	Y	N	4	KNOWLEDGE
		Is the cut on the main pulmonary artery (MPA):				
	8	i) >2mm away from the branch pulmonary artery orifice?	Y	N	3	KNOWLEDGE
	9	ii) Clean? (i.e. not jagged or having sharp protruding points)	Y	N	3	RESPECT
10	iii) Avoids damaging the pulmonary artery orifices +/- pulmonary valve?	Y	N	5	RESPECT	
<b>3</b>	<b>DKS/ Double-Barrel anastomosis</b>					
	11	<b>Cutback 1</b> – Has a cutback incision been made in the aortic root adjacent to the pulmonary root?	Y	N	2	KNOWLEDGE
	12	Is the cut 2-4mm in length?	Y	N	3	RESPECT
	13	<b>Cutback 2</b> - Has a matching cutback incision been made into the pulmonary root?	Y	N	2	KNOWLEDGE
	14	Is the cut the same length as the previous cutback incision?	Y	N	3	RESPECT
	15	Has the anastomosis commenced at the bottom/apex of the incision?	Y	N	3	FLUENCY
		Suture assessment:				
	16	i) Are <b>all</b> sutures evenly spaced from one another <b>with</b> a gap of 1-2mm between suture bites?	Y	N	3	FLUENCY
17	ii) Are <b>all</b> sutures an adequate distance from the tissue edge (1-2mm)?	Y	N	3	FLUENCY	
<b>4</b>	<b>Resection of Ductal tissue</b>					
	18	Has the PDA been transected?	Y	N	2	FLUENCY
	19	Has all the ductal tissue been removed?	Y	N	4	KNOWLEDGE
<b>5</b>	<b>Preparation for augmentation of the ascending aorta and aortic arch</b>					
	20	Has the delegate cut along the lesser curvature of the aortic arch to where the aorta was transected? (*note: isthmus is not resected on model)	Y	N	4	KNOWLEDGE
	21	Is the incision clean without any jagged edges?	N	Y	3	RESPECT
<b>6</b>	<b>Arch Reconstruction</b>					
	22	Has an oval patched shaped been fashioned to perform the arch reconstruction?	Y	N	4	KNOWLEDGE
	23	Is the diameter of the patch approximately 1.5x the diameter of the descending aorta?	Y	N	4	KNOWLEDGE
	24	Has the patch anastomosis commenced at the toe/apex of the anterior descending aorta?	Y	N	3	FLUENCY
	25	Has the posterior end of the suture line been continued until beyond the innominate artery ?	Y	N	4	KNOWLEDGE
	26	Has the anterior suture line been fashioned in the same manner?	Y	N	3	FLUENCY
		Suture assessment:				
	27	i) Are <b>all</b> sutures evenly spaced from one another <b>with</b> a gap of 1-2mm between suture bites?	Y	N	3	FLUENCY
	28	ii) Are <b>all</b> sutures an adequate distance from the tissue edge (1-2mm)?	Y	N	3	FLUENCY
	29	Has the patch been sized to the end of the aorta?	Y	N	4	KNOWLEDGE

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<b>7</b>	<b>Anastomosis of DKS to patch</b> (*note there are variations to this technique)						
	<b>Technique 1: 'V' cutback incision</b> (Skip this section if Technique 2 used)						
	30	Has a 'V' cutback incision been made in the patch?	Y	N	3	KNOWLEDGE	
	31	i) Is the incision length adequate to anastomose the DKS/double barrel? (i.e. the length should match the diameter of the pulmonary root)	Y	N	5	KNOWLEDGE	
	32	Has the anastomosis between the patch and the pulmonary root part of the DKS been commenced at the apex of the V?	Y	N	3	FLUENCY	
	33	Has the posterior edge of the patch been anastomosed first to the pulmonary root part of the DKS?	Y	N	4	FLUENCY	
	34	Has the anterior edge of the patch been anastomosed to the pulmonary root part of the DKS?	Y	N	3	FLUENCY	
	35	Have any redundancies of the patch been trimmed away (if applicable)?	Y	N	4	KNOWLEDGE	
	36	Has the aortic root part of the DKS been anastomosed directly to the native aortic arch tissue? (i.e. native tissue to native tissue)	Y	N	4	KNOWLEDGE	
	Suture assessment						
	37	i) Are <b>all</b> sutures evenly spaced from one another <b>with</b> a gap of 2-3mm between suture bites?	Y	N	3	FLUENCY	
	38	ii) Are <b>all</b> sutures an adequate distance from the tissue edge (2-3mm)?	Y	N	3	FLUENCY	
	<b>Technique 2: Reimplantation technique</b> (Skip this section if Technique 1 used)						
	39	Has the delegate completely anastomosed the arch reconstruction patch to the aorta?	Y	N	3	KNOWLEDGE	
	40	Has an oval incision been made in the reconstructed patch to accommodate the reimplantation of the DKS?	Y	N	4	KNOWLEDGE	
	41	i) Is the incision an adequate size to anastomose the DKS/Double-barrel? (i.e. length of incision approximately the diameter of the DKS)	Y	N	5	KNOWLEDGE	
	42	ii) Is the incision clean? (i.e. no jagged edges)	Y	N	3	RESPECT	
	43	Has an anastomosis between the DKS/double barrel and the reconstructed patch commenced distally at the apex ?	Y	N	3	FLUENCY	
	44	Has the posterior suture line been completed first?	Y	N	4	FLUENCY	
	45	Has the anastomosis been completed with the anterior suture line to re-implant the DKS/double barrel	Y	N	3	FLUENCY	
	Suture assessment						
	46	i) Are <b>all</b> sutures evenly spaced from one another <b>with</b> a gap of 2-3mm between suture bites?	Y	N	3	FLUENCY	
	47	ii) Are <b>all</b> sutures an adequate distance from the tissue edge (2-3mm)?	Y	N	3	FLUENCY	
	<b>SCORE THIS SECTION FOR BOTH TECHNIQUES TO COMPLETE ASSESSMENT</b>						
	<b>8</b>	<b>Patch assessment:</b>					
		48	Are there any visible holes within the patch?	N	Y	4	RESPECT
		49	Is the patch kinked at any point?	N	Y	5	RESPECT
50		Is there any narrowing of the anastomosis between the DKS/double-barrel and the reconstructed arch?	N	Y	5	RESPECT	
51		Have any plication sutures been required to make the patch narrower or additional patch material used to fill a gap in the patch?	N	Y	4	RESPECT	
52		Is there an adequate sized PA window to prevent left pulmonary artery/ left main bronchus compression?	Y	N	5	RESPECT	
53		Is the arch reconstruction complete?	Y	N	5	FLUENCY	
			<b>TOTAL SCORE</b>	<b>155</b>			