

OSCE

Candidate information

Your RMO has been seeing Kayle, a 2 week old baby brought in by his parents with increased work of breathing. The parents are concerned because Kayle's older brother Keenwa has bronchiolitis at the moment.

Please take a focussed history from your RMO and advise on management.

Domain	%
Medical expertise	60
Prioritisation and decision making	20
Communication	
Teamwork and collaboration	
Leadership and management	
Health advocacy	
Scholarship and teaching	20
Professionalism	

Neonate duct dependent lesion

Actor (RMO) information

You have been seeing Kayle, a 2 week old baby brought in by his parents with increased work of breathing. The parents are concerned because Kayle's older brother Keenwa has bronchiolitis at the moment. You have approached your consultant to present the patient.

Kale was born at 38/40 by NVD. Over the past 24 hours, he has become increasingly dyspnoeic, with widespread inspiratory/expiratory wheezes in all fields. He seems to be too breathless to feed. He has had no fevers.

Examination showed a flat looking baby, with tracheal tug and recession. His abdomen is distended.

HSD+SEM, loud.

Obs:

BP 90/60

HR 180

T 36.5

Sats 82% on room air; 84% on 2L oxygen

Prompts:

- What are the differential diagnoses for a sick neonate?
- How should Kayle be managed?

Marking:

- Recognises possible duct-dependent lesion and manages appropriately
- Sick neonate causes – THE MISFITS (trauma, thermal, tumour, heart disease/hypovolaemia/hypoxia, endocrine (thyroid, DM, CAH), metabolic disturbance, inborn errors of metabolism, seizure/CNS, formula misadventure, intestinal catastrophe, toxins, sepsis)

	Mark
Recognises possible duct-dependent lesion	2
Appropriate management of same – no Oxygen, urgent Ix, prostaglandin infusion	2
IV access, bloods, etc	1
Orders CXR	1
Lists at least 5 causes of sick neonate	2
Moves to resuscitation area	1
Early involvement of neonates, paedcs.	1

DUCT-DEPENDENT CONGENITAL HEART DISEASE

Most congenital heart disease is picked up in the antenatal period and managed appropriately. However, neonates with a duct-dependent circulation do occasionally present to ED acutely unwell when the ductus arteriosus closes. This is normally in the first two days of life.

Consider duct dependent CHD in any newborn presenting with shock or cyanosis in the first few days of life.

Classification of Duct-Dependent Lesions

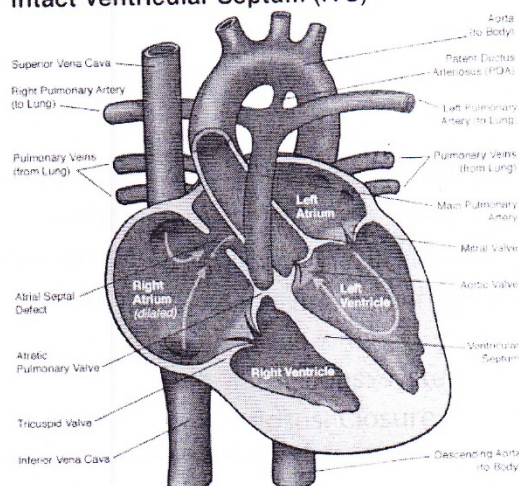
Duct dependent systemic circulation	Duct dependent pulmonary circulation	Duct dependent systemic and pulmonary circulation
Hypoplastic left heart syndrome	Pulmonary atresia	Transposition of the great arteries
Critical aortic stenosis	Critical pulmonary stenosis	
Coarctation of the aorta	Tricuspid atresia	
	Severe tetralogy of Fallot	

Mechanism

Duct-dependent systemic lesions: systemic circulation is dependent on right to left flow through the ductus arteriosus. Closure results in cardiovascular collapse.

Duct-dependent pulmonary lesions: pulmonary blood flow is dependent on left to right shunting from the aorta to the pulmonary arteries through the ductus.

Pulmonary Atresia Intact Ventricular Septum (IVS)



Coarctation

