“Innocent” murmur

Murmur

Innocent murmur

Benign murmur

Flow murmur

Physiological murmur

Normal murmur

“Innocent” murmur

Murmur

Asymptomatic murmur

Healthy child with murmur

Is it due to a cardiac anomaly?

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Present: traditional teaching methods

Traditionally, cardiac auscultation has been taught best at the bedside during clinical undergraduate training and in preparation for postgraduate membership examinations. It is an essential component of the clinical examination, but like most clinical skills requires repetition[1] and clinical experience to make an accurate diagnosis.

Indeed, prior to the advent of echocardiography, physicians were totally reliant on their stethoscope and auscultatory skills to accurately diagnose and characterise cardiac murmurs.

2015

"Innoce

cardiac auscultation

is an essential component of the clinical examination, but like most clinical skills requires repetition[1] and clinical experience to make an accurate diagnosis.

Innocent Murmur

Healthy and asymptomatic

No other CVS finding -normal femorals
no heaves
heart sounds not loud

Soft

Systolic (venous hum continuous)

May vary with position and condition and time

Types of Innocent Murmur

Apical systolic - musical, mid-systolic

Still’s - mid-systolic LLSE

Pulmonary - soft, mid-systolic

Carotid bruit - louder in neck than aortic area

Venous hum - under right clavicle

usually toddler sitting up

less supine, neck movement

“Innocent” murmur

What is the Cause?

Pulmonary - pulmonary flow

Carotid bruit - flow in carotid artery

Venous hum - flow in great veins

“Innocent” murmur

What is the Cause?

Apical systolic -
Still’s -

not known

Left ventricular chords
High normal velocity in LVOT

Types of Innocent Murmur

Apical systolic - musical, mid-systolic

Still’s - mid-systolic LLSE

Pulmonary - soft, mid-systolic

Carotid bruit - louder in neck than aortic area

Venous hum - under right clavicle

usually toddler sitting up

goes if supine, neck movement

“Innocent” murmur

Innocent Murmur vs Minor Anomaly

Apical systolic	-	mitral regurgitation / apical VSD
Still’s	-	VSD
Pulmonary	-	pulmonary stenosis / ASD
Carotid bruit	-	aortic stenosis / bicuspid valve
Venous hum	-	ductus if on left (rarely)

Echo in Innocent Murmur

Normal great artery and chamber sizes
Normal velocity over outlet valves
Normal descending aorta velocity
No more than physiological regurgitation

Exact measurement ideal but not essential
2D and colour if not M-mode and spectral

“Innocent” murmur

Echo in Asymptomatic Murmur

Search for VSD (time consuming if ? apical)

ASD (not so easy in large people)

PDA

Check aortic valve morphology

Echo in Innocent Murmur

What is normal?

How do you report minor variations?

Does the referrer know what it is about?

Echo in Innocent Murmur

What is normal?

How do you report minor variations?

Does the referrer know what it is about?

- Aorta / PA velocity 2.0m/s?

Echo in Innocent Murmur

What is normal?

How do you report minor variations?

Does the referrer know what it is about?

- Aorta / PA velocity 2.0m/s?
- Descending aorta velocity 2.5m/s?
- Regurgitation physiological?
- Atrial flow at 3 months?
- Silent duct?

“Innocent” murmur

ECHO IS EXTREMELY USEFUL WHEN LEARNING

BUT AIM TO DEVELOP THE CLINICAL SKILL

“Innocent” murmur

BUT IF IN DOUBT
ECHO IS
EXTREMELY
USEFUL

(Clinicians can make mistakes)