

Making heads or tails of a coarctation

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CASE 1: A 25-year-old male was referred to our cardiology clinic with a suspected diagnosis of coarctation of the aorta (CoA). He was asymptomatic, normotensive but had an ejection systolic murmur over his chest and radio-femoral delay on clinical examination.

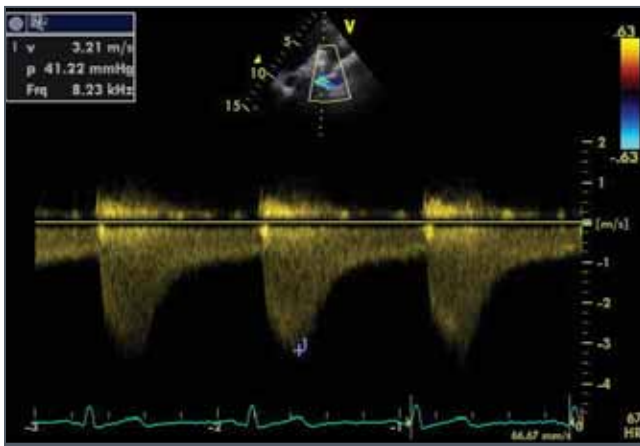


FIGURE 1: CW Doppler through the descending thoracic aorta on a suprasternal long axis view via transthoracic echocardiography.

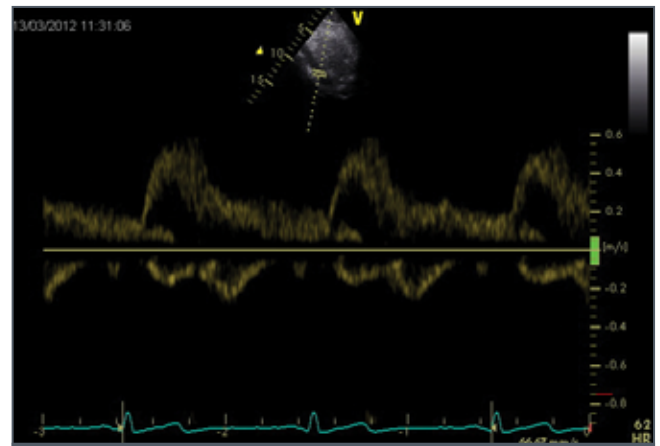


FIGURE 2: PW Doppler in the abdominal aorta acquired subcostally.

QUESTION 1: Which ONE of the following is the correct diagnosis?

- (a) Severe aortic regurgitation
- (b) Confirmed significant CoA
- (c) Severe aortic regurgitation with CoA
- (d) Interrupted aortic arch

CASE 2: A 23-year-old male was referred for routine follow-up after having had a surgical end-to-end repair of a CoA as a child. Of note, he also has a bicuspid aortic valve.

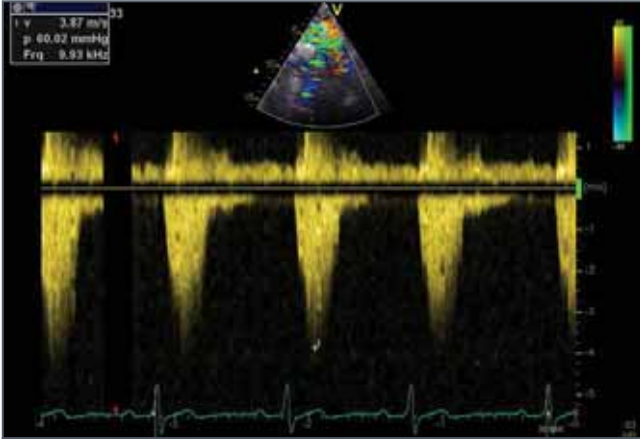


FIGURE 3: CW Doppler through the descending thoracic aorta on a suprasternal long axis view via transthoracic echocardiography.

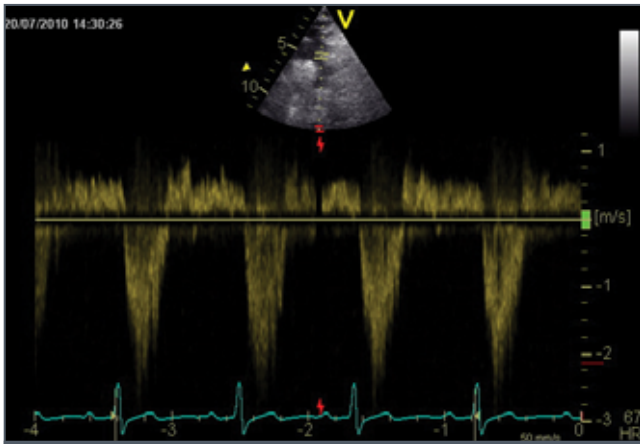


FIGURE 4: PW Doppler in the aortic arch on a suprasternal long axis view via transthoracic echocardiography.

QUESTION 2: Which ONE of the following best explains the Doppler tracings?

- (a) Severe aortic regurgitation
- (b) Severe recoarctation
- (c) Severe aortic regurgitation with recoarctation
- (d) Interrupted aortic arch

CASE 3: A 35-year-old male was referred for exclusion of CoA. He was hypertensive, resistant to 4 anti-hypertensive agents, with pronounced radio-femoral delay.

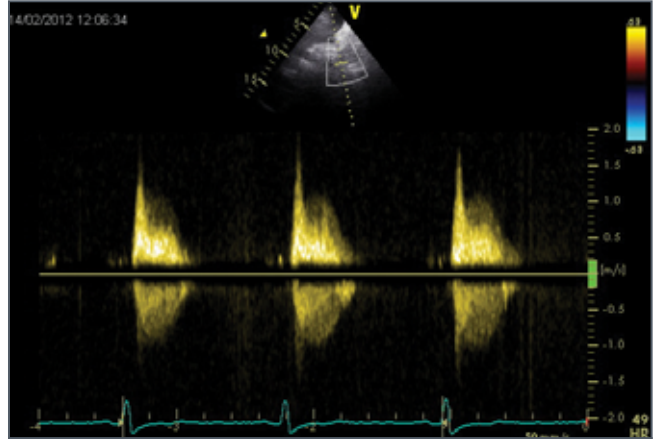


FIGURE 5: CW Doppler through the descending thoracic aorta on a suprasternal long axis view.

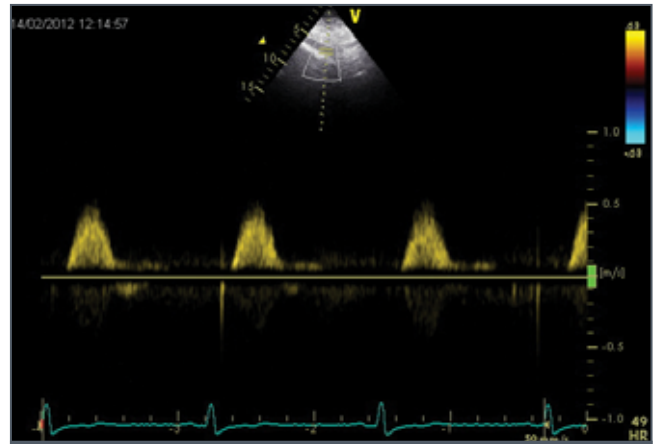


FIGURE 6: PW Doppler in the abdominal aorta acquired subcostally.

QUESTION 3: Which ONE of the following best explains the Doppler tracings?

- (a) Severe aortic regurgitation
- (b) Significant CoA
- (c) Severe aortic regurgitation with CoA
- (d) Interrupted aortic arch

Please analyse the spectral Doppler traces carefully and commit yourself to an answer before checking the explanation.

ANSWER on page 200