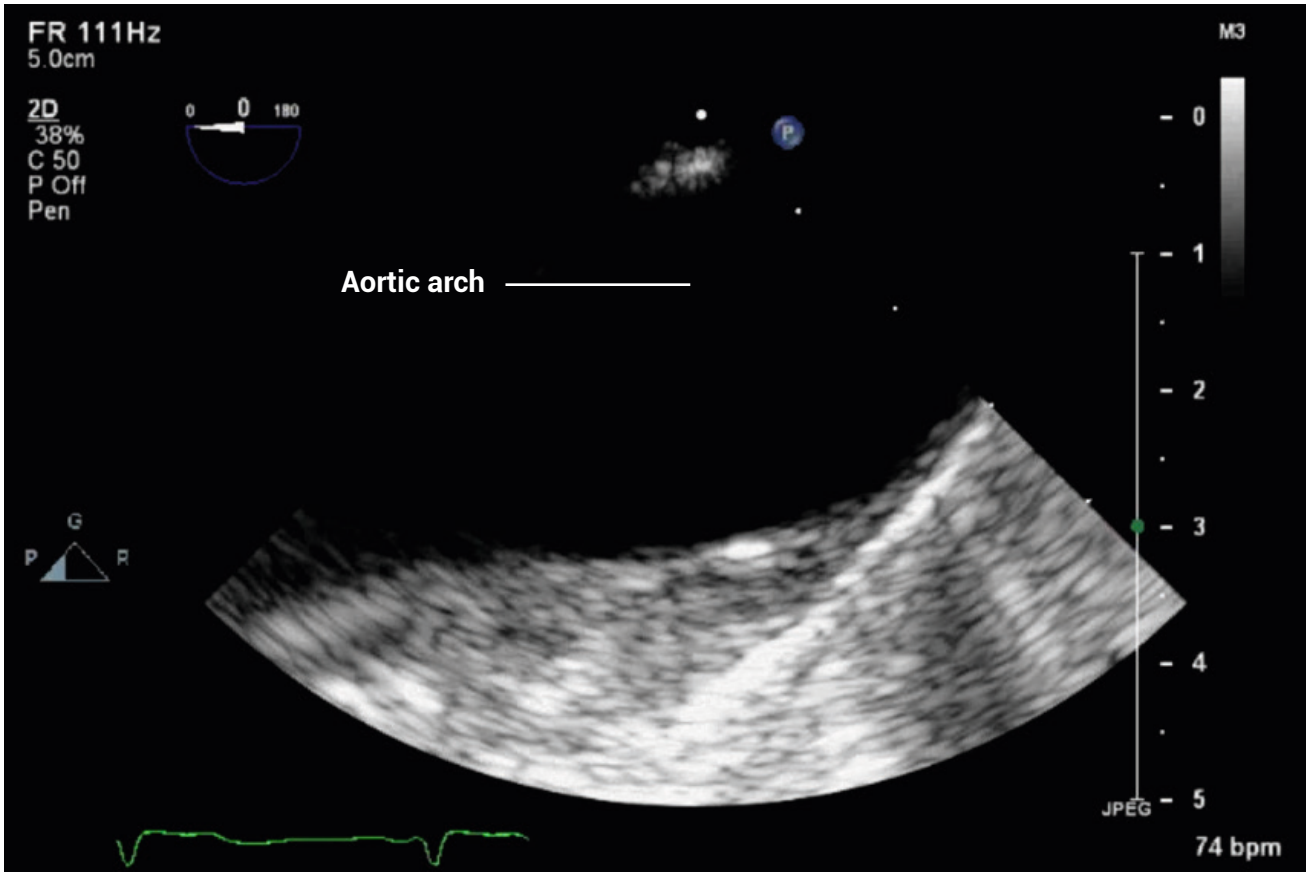
TEE ESSENTIALS

Assessment of the aorta: Upper-esophageal aortic arch views

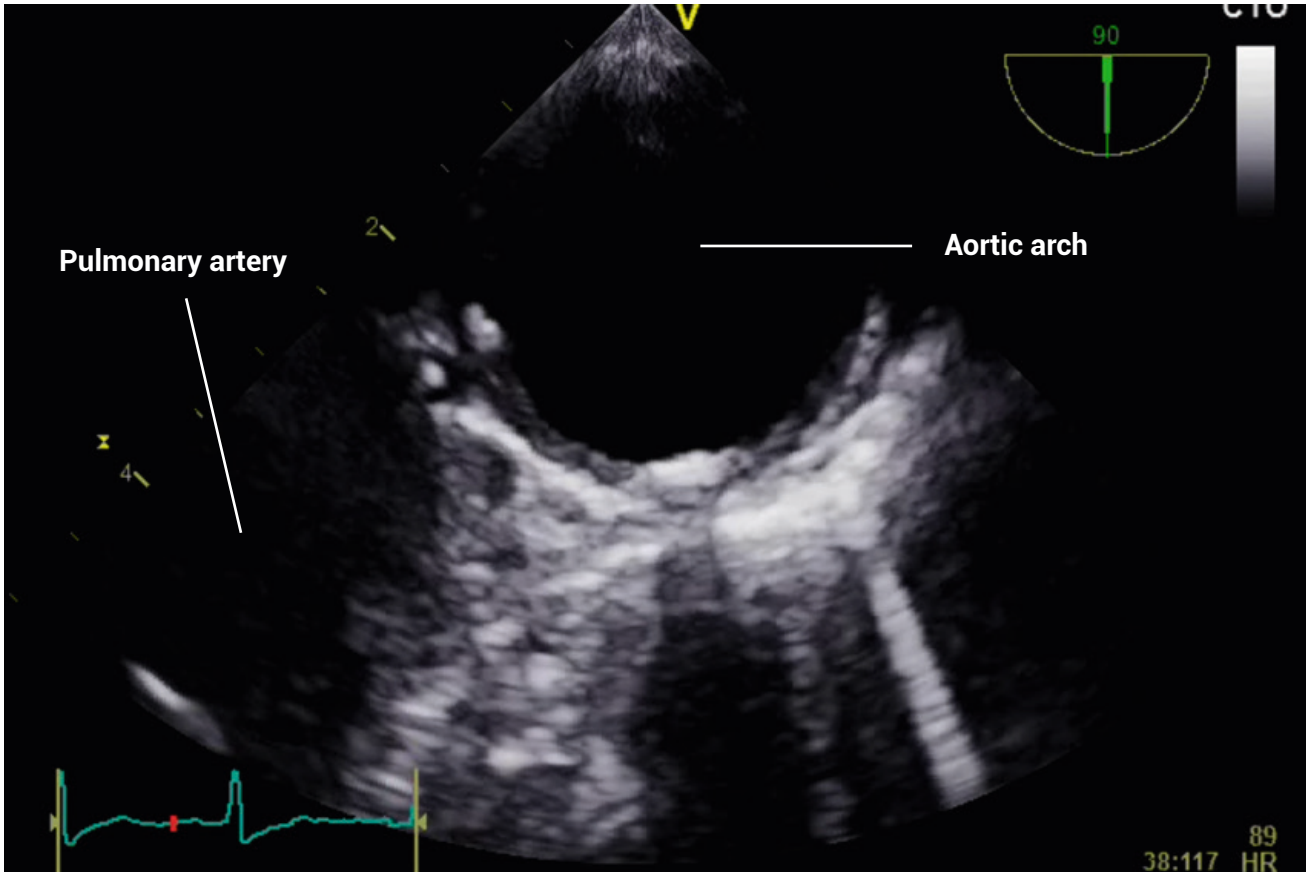
Upper-esophageal aortic arch long-axis view

The upper-esophageal aortic arch long-axis view is usually obtained immediately after the mid-esophageal descending thoracic aorta short-axis view, by withdrawing the probe (at a transducer angle of around 0–10°) until the aorta is no longer circular but starts to appear elongated. This indicates that the probe has reached the distal aortic arch, and you may be able to locate the origin of the left subclavian artery around this position. Follow the aortic arch by turning the probe towards the patient's right. This brings the mid-arch, and then the proximal arch, into view. Look for the origin of the other head and neck branch vessels as you inspect the arch. The junction of the proximal arch and distal ascending aorta is sometimes impossible to visualize, because the left main bronchus gets in the way.



Upper-esophageal aortic arch short-axis view

Next, rotate the transducer angle forwards to around 70–90°. This provides the upper-esophageal aortic arch short-axis view. Again, by turning the probe as appropriate, the proximal, mid, and distal arch can be brought into view. The pulmonary artery and pulmonary valve are also usually seen in this view, and it is sometimes possible to undertake Doppler assessment of pulmonary valve flow.



In both the long-axis and short-axis views, assess the appearance of the aorta, and note the presence/absence of any abnormalities such as dissection or atheroma. Use color Doppler in the long-axis view to assess flow in the aortic arch, and in particular to look for any diastolic flow reversal in the setting of aortic regurgitation.

Further reading

Hahn RT, Abraham T, Adams MS, et al. 2013. Guidelines for performing a comprehensive transesophageal echocardiographic examination: Recommendations from the American Society of Echocardiography and the Society of Cardiovascular Anesthesiologists. *J Am Soc Echocardiogr*. **26**: 921–964.