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Review article

The use of echocardiography in acute cardiovascular care

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ABSTRACT

Echocardiography is one of the most powerful diagnostic and monitoring tools available to the modern emergency/critical care practitioner, and the provision of echocardiography is fundamental to the management of patients with acute cardiovascular disease. Echocardiography can provide important information throughout the whole patient pathway, having been shown to change therapy in 60–80% of patients in the pre-hospital setting, improve diagnostic accuracy and efficiency in the emergency room, reveal the aetiology of unexplained hypotension in 48% of medical intensive care patients and provide information additional to that obtained from the pulmonary artery catheter. In the critical care setting echocardiography can be used to measure/monitor cardiac output and to determine abnormalities of cardiac physiology and coronary perfusion, as well as providing more standard anatomical information related to diagnosis. In this document, we describe the practical applications of echocardiography in patients with acute cardiovascular conditions, in particular with acute chest pain, acute heart failure, suspected cardiac tamponade, complications of MI, acute valvular heart disease including endocarditis, acute disease of the ascending aorta and post-intervention complications.

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