

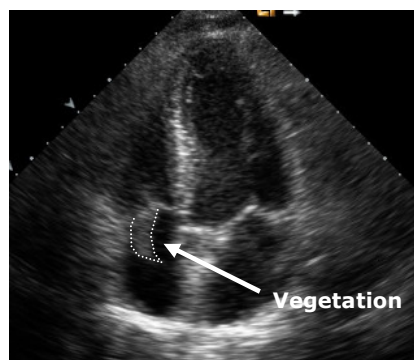
**(Refer to page 37)**

**Answer: Tricuspid valve vegetation/  
*Staphylococcus aureus* endocarditis.**

Infective endocarditis (IE) is defined as infection of the endocardial surface of the heart, which may include one or more heart valves, the mural endocardium, chordae tendinae, septal defects or even on intracardiac devices. The precise incidence of IE is unknown and is difficult to ascertain. However, it is estimated that 10,000 to 15,000 new cases are diagnosed in the United States every year. Men predominate at a ratio ranging from 3:2 to 9:1. IE is increasingly being seen in the elderly as the population age.<sup>1</sup>

IE generally occurs as a consequence of non-bacterial thrombotic endocarditis, which results from turbulence or trauma to the endothelial surface of the heart. A transient bacteraemia then seeds the sterile platelet/fibrin thrombus resulting in IE. It has evolved into several variations and it always important to consider it to avoid any delay or missing the diagnosis. Endocarditis is categorised in the following categories: Native valve endocarditis (NVE) (acute & subacute), Prosthetic valve endocarditis (PVE) (early & late) and Intravenous drug abuse (IVDA) endocarditis. Other terms commonly used to classify types of IE include pacemaker IE and nosocomial IE (NIE).<sup>2</sup>

Acute NVE frequently involves normal valves and usually has an aggressive course.



It is a rapidly progressive in both healthy and debilitated persons. Virulent organisms, such as *Staphylococcus (S) aureus* and Group B Streptococci, are typically the causative agents. An underlying structural valve disease may not be present.<sup>2</sup>

In 75% of cases of IVDA IE, no underlying valvular abnormalities are noted, and 50% involve the tricuspid valve.<sup>2</sup> *S. aureus* is the most common causative organism.<sup>2,3</sup> The diagnosis is usually based upon a constellation of clinical findings, laboratory, microbiological and echocardiography investigations. A minimum of three blood cultures should be obtained over a time period. Trans-thoracic echocardiogram is mandatory and a trans-oesophageal echocardiogram should be performed is still in doubt. The Duke's Criteria remain one of the main diagnostic criteria used. Treatments include four to six weeks of appropriate intravenous anti-microbial therapy and surgery may be required in some cases.<sup>2,3</sup> (Refer to supplementary text for additional information on IE).

## REFERENCES

- 1: Karchmer AW. Infective endocarditis. In: Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine. 7<sup>th</sup> ed. WB Saunders Co; 2005:1633-1658
- 2: Bruschi JL. Infective endocarditis. Medscape reference. Updated November 29, 2011. Available from <http://emedicine.medscape.com/article/216650> (Accessed 15<sup>th</sup> January 2012).
- 3: Que YA, Moreillon P. Infective endocarditis. *Nat Rev Cardiol.* 2011; 8:322-36.