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Do we have enough evidence to insist we have IVUS?

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The use of intravascular ultrasound (IVUS), a method of imaging the wall of the coronary artery, complements the information obtained by coronary angiography, which defines the contour of the vessel lumen. IVUS demonstrates that significant mural disease is almost invariably present in angiographically normal segments of “focally” diseased coronary arteries,¹ and has shown obstructive disease in patients with coronary arteries judged angiographically to be normal or near normal,² which might justify its availability, at least as a supraregional service.

IVUS has been used to guide selection of the device used for percutaneous interventional treatment of coronary lesions but it has yet to be shown that this approach influences clinical outcome, and few interventional centres offer routine pre-interventional IVUS imaging and a choice of interventional devices that includes three different atherectomy catheters and an excimer laser.³

The demonstration by IVUS that coronary stents deployed at nominal balloon pressure are usually under expanded was an invaluable contribution.⁴ We now appreciate the need for optimal stent deployment, but it is unclear whether the routine use of IVUS guidance is

actually essential for optimal stenting. The remarkable results obtained in the Benestent II pilot study, for example, were obtained without the routine use of this technique.⁵

The use of IVUS will continue to help our understanding of coronary artery disease. As it is both time consuming and expensive, widespread clinical use is not justifiable unless or until further information suggests that this significantly improves the clinical outcome of large numbers of patients.

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