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Not just alternating ectopics

A 78-year-old man awaiting coronary artery bypass grafting for angina underwent elective bilateral stenting of renal artery stenoses. There was a remote history of myocardial infarction (20 years earlier) but no history of arrhythmia. Five hours post-procedure he became abruptly sweaty and short of breath, coinciding with a change in heart rhythm from sinus to that shown in panel A. The alternating right and left bundle branch block morphology (without visible P waves in this case) is classic for bidirectional ventricular tachycardia (BVT). Serum potassium was 4.5 mmol/l; intravenous magnesium was given with no effect on heart rhythm. Lignocaine was then administered, leading to longer runs of sinus rhythm between paroxysms of BVT (panel B). Intravenous amiodarone subsequently produced full suppression of this arrhythmia. The patient later underwent insertion of an implantable cardioverter defibrillator.

BVT is most commonly associated with digoxin toxicity (although not in this case).1 It is also described as a feature of certain primary cardiac diseases (eg, arrhythmogenic right ventricular cardiomyopathy), various other genetic syndromes (eg, hypokalaemic and hyperkalaemic periodic paralyses) and aconite poisoning.2 To our knowledge, there is no association with contrast agents and thus no causative link to renal artery stenting is apparent. The only candidate substrates in this case appear to have been underlying cardiac ischaemia and/or moderate left ventricular impairment secondary to ischaemic heart disease. Despite the prevalence of these last two conditions in clinical practice, they represent unusual causes for this uncommon tachycardia.

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REFERENCES


Panel B