Central line placement may terminate ventricular tachycardia!

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A 75-year old man developed ventricular tachycardia (VT) whilst in hospital awaiting coronary artery bypass grafting. He was hemodynamically stable, therefore intravenous Amiodarone was recommended. This electrocardiogram (ECG) trace was recorded during the insertion of an internal jugular central venous line using the Seldinger technique [Figure 1]. The ECG demonstrates VT originating from the left ventricle (RBBB morphology, negative in lead I). As the guide wire was being introduced, it was transiently advanced too far triggering a burst of premature ventricular beats (PVB) originating from the right ventricle (LBBB morphology, positive in lead I). These PVBs with short coupling interval terminated the tachycardia and restored sinus rhythm in manner effectively analogous to VT termination with anti-tachycardia pacing (ATP) algorithms employed in implantable cardioverter-defibrillators (ICD). In our case, central line catheter was placed to provide central venous access and it was not intended to terminate the ventricular tachycardia. Central line insertion should never be considered as an option for termination of arrhythmia as it may cause serious complications including: Pneumothorax, air embolism,



Figure 1: (ECG) trace was recorded during the insertion of an internal jugular central venous line using the Seldinger technique

central line associated blood stream infections (CLABSIs), thrombosis. Central line insertion is occasionally associated with induction of ventricular and supraventricular arrhythmias, however successful termination of sustained arrhythmia is unusual.

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