Spontaneous Termination of Permanent Atrial Fibrillation

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A 71-year-old woman was admitted to our hospital with a complaint of frequent episodes of faintness. She had a previous history of combined valvular disease treated by aortic, mitral and tricuspid valve replacement at the age of 41, sick sinus syndrome followed by an implantation of AAI pacemaker at the age of 53 and chronic atrial fibrillation (AF) which continued for 15 years, clinically consistent with permanent AF which is impossible to successfully defibrillate in contrast to persistent AF. On admission, the 12-lead electrocardiogram (ECG) exhibited irregular ventricular responses and neither visible P nor fibrillatory waves, consistent with AF (Picture 1A). Transthoracic echocardiography revealed left atrial diameter of 55 mm. The ECG monitoring detected spontaneous transition of AF to slow junctional escape mixed with non-captured, AAI pacing spikes (S) (Picture 2), suggesting that intra-atrial activities responsible for the ongoing permanent AF (Picture 1B), which inhibited AAI pacing, suddenly terminated, followed by sinus arrest accompanied by pacing failure due to atrial standstill at the tip of the pacing lead (1). This case clearly exhibited a natural course of permanent AF which might spontaneously terminate especially in an advanced atrial disease and is not necessarily “permanent” (2).

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References