We experienced the two cases of the undersensing of ventricular fibrillation (VF) at the time of defibrillation threshold test. These patients were Brugada syndrome with implantable cardioverter-defibrillator (ICD). After we inducted the VF by shock on T stimulation, the undersensing of VF immediately occurred because of the very low amplitude of intracardiac electrocardiogram (EGM). After three to five seconds, the amplitude of EGM gradually increased and the undersensing of VF did not occur. But after we induced the VF by the fast ventricular pacing, the amplitude of EGM was high and the undersensing of VF did not occur at all. These phenomenons were reproducibility observed in two cases of Brugada syndrome. It was suspected that the reasons of these phenomenons were caused by the mechanical problem of ICD generator and lead or the inducing method of VF.

Keywords: implantable cardioverter defibrillator, undersense