





Figure 2 ICD therapy induced by washing leads in the laboratory. Upper channel, intracardiac ECG signals; Lower channel, pacemaker sensing and marker channel. VS, ventricular sensed beat; VP, ventricular paced beat; FS, fibrillation sensed beat; FD, fibrillation detected.

far more serious result and possible fatality. It is clear that guidelines should be issued for the benefit of personnel who may be required to explant any devices particularly where there is potential for harm. As new devices are developed, guidelines for their removal should be supplied at the same time as the introduction of the unit. It seems logical that the manufacturers should be responsible for producing a set of guidelines, although these may need modification in the light of experience.

We suggest that when an ICD is removed the electrodes should be cut off close to their connection with the generator using wirecutters with adequate insulation, and wearing rubber gloves. Once disconnected the generator

can be removed safely and the leads can be left inside the body.

- 1 Lechleuthner A. Electric shock to paramedic during cardiopulmonary resuscitation of patient with implanted cardioverter-defibrillator [letter]. *Lancet* 1995;345:253.
- 2 Williams J M, Rock DT, Pabst SJ, Grill CR, DeAntonio HJ, Mahmud R, et al. Clinical experience with the implantable cardioverter defibrillator. *Ann Thorac Surg* 1994;58:1297-303.
- 3 Jones GK, Bardy GH, Kudenchuk PJ, Poole JE, Dolak GL, Troutman C, et al. Mechanical complications after implantation of multiple-lead nonthoracotomy defibrillator systems: implications for management and future system design. *Am Heart J* 1995;130:327-33.
- 4 Fahy GJ, Kleman JM, Wilkoff BL, Morant VA, Pinski SL. Low incidence of lead related complications associated with nonthoracotomy implantable cardioverter defibrillator systems. *Pacing Clin Electrophysiol* 1995;18:172-8.
- 5 Clemon HF, Ellenbogen KA, Belz MK, Wood MA, Stambler BS. Safety of pacemaker implantation in patients with transvenous (nonthoracotomy) implantable cardioverter defibrillators. *Pacing Clin Electrophysiol* 1994; 17:2285-91.