consent is an essential part of the implant process. Our aim was to get an insight into implanters' (Imp) practices prior to an ICD implantation.

Methods A questionnaire survey was sent to UK ICD Imp to test their knowledge of the risk and benefits of an ICD in patients who satisfy trial and national guideline criteria and the incidence of implant complications. Information of the style and language of consent was requested. This questionnaire was specifically aimed at Imp and was part of the larger questionnaire looking at knowledge, attitudes and factors influencing ICD prescription in the UK.

Results Replies were received from 23 implanters. 35% of the responders were between the age of 30–39 years and 39% were between 40 and 49 years. 83% of the responders were Consultants and 96% were working in an implantating centre. 83% of Imp were fully aware of Primary Prevention (PP) NICE guidelines while 78% were fully aware of Secondary Prevention (SP) NICE guidelines. There was widespread use of information leaflets (87%) and specialist ICD nurses (83%) to disseminate information to patients. All responders said they would personally discuss the therapy with the patient prior to the implantation regardless of the referral source. A discussion regarding the prevention of SCD, inappropriate shocks and driving restrictions were performed by 96% of responders and device infections and lead failures discussed by 91%. Use of absolute risk reduction in percentages and number needed to treat while explaining the risks and benefits gained from ICDs were used by 22% and 26% respectively. There was widespread use of phrases like "small risk" or "moderate risk" (61%) and life prolongation (eg, lets you live longer by an average of 3 months) (30%). Replies also indicated that Imp under-estimate overall mortality in medicallytreated and ICD-treated patients, lead dislodgement requiring re-positioning and major haematoma requiring reoperation. Imp overestimate infections leading to device removal and the incidence of pneumothorax when compared to published trial or study data.

Conclusion The majority of implanters are aware of UK ICD guidelines. The patient consent process is not universal. Guidelines and awareness about end-of-life care in ICD patients is needed and should be part of the initial consent process. Evidence based use of risk and benefit terminologies like ARR and NNT are needed to better inform the patient rather than abstract phrases. Increasing awareness of ICD complication rates can help patients and physicians balance risk against benefit which could lead to improved patient satisfaction with their therapy.

Abstract 157 Table 1

Estimate of ICD complications	Mean %	Published/Trial data %
Death as a complication of device implant	0.37±0.48	0.77% (Circulation.1998;98:663–670); 2.08% (Br Heart J.1995:73:20–24)
Lead dislodgement requiring lead repositioning	3.5±2.08	5% (PACE.2005; 28:926–932); 10% (Circulation.1998;98:663–670)
Lead failure requiring extraction or additional lead insertion	5.4±7.28	4.3% (PACE.2005;28:926–932)
Major haematoma requiring reoperation	2.72±3.07	5.8% (JAMA.2006:295:1901–1911)
Device infection requiring removal/extraction	2.27±2.4	0.5% (PACE.2005:28:926–932); 0.77% (Circulation.1998;98:663–670);0.7% (MADIT2 trial)
Cardiac tamponade	0.7±1.07	0.2% (PACE.2005;28:926–932); 0.64% (Circulation.1998;98:663–670)
Pneumothorax	1.68±1.17	1.1% (PACE.2005; 28:926–932); 0.89% (Circulation.1998;98:663–670)
Inappropriate shocks	14.8±10.92	12% (PACE.2005; 28:926–932); 14.91% (Circulation.1998;98:663–670); 18% (Z Kardiol.1996;85:809–819)
Psychological problems associated with the device	22.6±26.68	13–38% (Clin Cardiol 1999;22:481–9)

158 IS IT COST EFFECTIVE TO USE A PLUGGED LV PORT?

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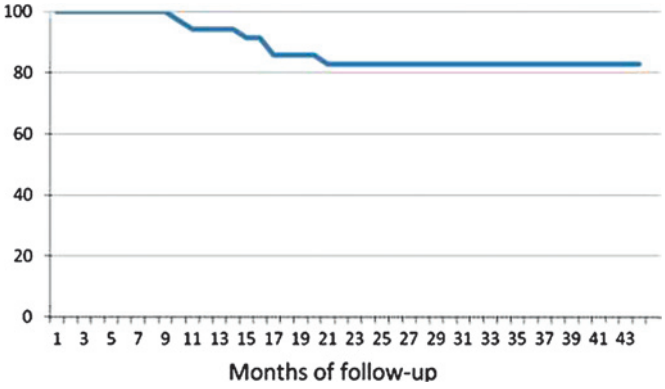
Background Many patients receiving ICD implants do not meet criteria for CRT therapy, yet are often felt likely to benefit from CRT in the future. The reasons for this include less severe NYHA class of HF symptoms at the time of implant, narrow QRS, and (progressive) atrio-ventricular conduction delay. Management options include only implanting DDD / VVI devices, and then upgrading to CRT if required; implanting CRT-D devices but without an LV lead, with the LV port "plugged", such that if an upgrade were to become necessary, only a new LV lead (and implant kit) would be required; and finally, implanting CRT-D devices with LV leads in all patients in the first instance, as has been suggested by the recent Madit-CRT and RAFT studies. It is not clear which of these strategies is superior in terms of the cost-benefit ratio.

Purpose This study analyses a retrospective cohort of patients who received CRT-D devices but without LV leads, to examine the cost implications of this approach, and to compare this cost to that of merely implanting a DDD device, or implanting a full CRT-D system initially.

Method A retrospective analysis of all patients receiving CRT-ICDs with plugged LV ports between September 2004 and June 2009 at our institution. Patient characteristics, indication for a plugged LV port, subsequent addition of a LV lead and reasons for doing so were taken from patient records. The total cost (surgery and hardware) was compared with the estimated cost of initially implanting single or dual chamber ICDs and upgrading the entire system, and to the cost of implanting full CRT-D systems up front.

Results 35 patients (27 male) were identified. Mean (SD) age was 67±8 years. 26 had ischaemic heart disease and 9 non-ischaemic dilated cardiomyopathy. All had LV EF<30%. Indications for a plugged LV port were LBBB and NYHA class I or II symptoms in 29 and NYHA class I or II with a narrow QRS but a high chance of becoming pacemaker dependent in 6. During a mean (SD) FU of 40 ±16 months, 6 (17%) patients had an LV lead added, all for the development of NYHA III symptoms, at 10, 11, 15, 17, 17 and 21 months respectively. Total cost at end of FU period was £ 654 000. If all patients had initially been implanted with VVI or DDD ICDs and 6 new CRT systems implanted, the estimated cost would have been £ 598 000. If all patients had received full CRT-D the cost would have been £ 665 000. Taking into account the time to develop symptoms, it is predicted that an upgrade rate of 26%–31% would be required before using a plugged LV port becomes cost-effective. Furthermore, full CRT-D system implantation is even less cost effective.

Conclusion In this series of ICD patients with potential CRT indications but minimal heart failure symptoms, only a small proportion subsequently required biventricular pacing. Using a CRT-ICD with a plugged LV port is not a cost effective strategy (Abstract 158 figure 1).



Abstract 158 Figure 1 Per cent freedom from upgrade to LV lead.