

THE REMOVAL AND DISPOSAL OF IMPLANTABLE CARDIOVERTER DEFIBRILLATORS IN KENT

What is an Implantable Cardioverter Defibrillator?

Implantable Cardioverter Defibrillators (ICDs) are electrical devices usually fitted just underneath the skin on the left side of the chest below the shoulder. They look like a pacemaker but as well as providing a pacing function they are also designed to give a strong electrical shock to the heart if it should go into certain life threatening rhythms.

Kent patients are having increasing numbers of ICDs fitted to prevent life threatening cardiological conditions and so there will be increasing numbers of cadavers presenting for pre cremation preparation.

Whereas removing a pacemaker post mortem provides no risk to a mortician the removal of an active ICD can deliver an electric shock to the mortician and should **not** be attempted.

Deactivation pre mortem.

It is advised that patients have the defibrillator function of their ICD deactivated before death as it is possible that the device could give a series of shocks to a patient during their natural death which should this happen would be distressing to both patient and relatives. To this end the cardiology community in Kent is looking at their provision of a deactivation service to patients and putting in place plans to ensure that those patients who wish to have their device deactivated can access a prompt service.

However good the deactivation service is some patients may not wish to have their device deactivated. Other patients will die a sudden death or without their terminal state being recognised. Many chronic conditions do not have a clear trajectory towards the end of life and planned deactivation is not always possible.

This could result in a cadaver reaching a mortuary with an active device in situ which will need to be removed if the remains are to be cremated.

Medical Devices Agency (MDA) Safety Notice SN 2002(35)

This safety notice states that an ICD should not be removed from a cadaver until it has been deactivated because there is a strong possibility of the device giving an electric shock to the mortician during removal.

How do I know what device is present?

It is difficult for morticians to identifying which device is present.

The cremation form only states if a pacemaker is present and has not been updated to include ICDs.

Although currently ICDs are slightly larger than pacemakers this should **not** be relied upon by morticians as a means of identification.

The MDA suggests X-raying the device to see the manufacturer's radiopaque symbol but this facility may not be available outside the hospital setting.

Otherwise it suggests incising over the device to see the manufacturer details on the casing and if necessary rotating the device in situ if the legend is not visible. Cardiology technicians however do not advise touching the device as doing so greatly increases the possibility of the mortician receiving a shock.

Safe methods of identifying a cardiological implant

1. Ask the relatives of the deceased for the pacemaker/ICD card which will have been issued on implantation. This will clarify what type of device is present.
2. Ring the cardiorespiratory department at the local hospital (see table in appendix for telephone numbers).
3. Ring the GP.

Deactivating an ICD

An ICD can only be deactivated by using a specialist piece of computer equipment placed over the device. Each manufacturers' device requires a different computer programme and all cardiorespiratory departments have the facility to deactivate all types of devices fitted in the UK.

In order to check whether or not a device has been deactivated pre mortem OR arrange deactivation please ring your local cardiorespiratory department. If the device is still active, arrangements need to be made with the hospital mortuary and cardiorespiratory department to bring the cadaver to the hospital for ICD deactivation.

Disposal of ICDs

Pacemakers and ICDs contain Lithium batteries and should be returned, once thoroughly cleaned and labelled with the patient's name and date of birth, to the local cardiorespiratory department for safe disposal. The ICD can also be interrogated by the department should this be required.

Appendix.

Contact details of cardiorespiratory departments in Kent

Hospital	Telephone number of cardiology department
Kent and Canterbury (Canterbury)	01227 783129
Kent and Sussex (Tunbridge Wells)	01892 632250
Maidstone	01622 224206
Medway (Gillingham)	01634 825233
Queen Elizabeth the Queen Mother (Margate)	01843 225544 Ext 62511
William Harvey (Ashford)	01233 616193

N.B. These departments are open Monday to Friday 8.30 am to 4 pm.