Procedure for safe removal of ICD and pacemaker wires post mortem

It is expected that many patients with implantable ICDs and pacemakers will die as a result of COVID-19 disease. Some of these may occur in hospital and some, unfortunately, will not.

Cremation with ICDs in place causes a risk of explosion and should be avoided. It is likely that cardiac physiologists will not have capacity to deactivate all ICDs.

This brief SOP outlines the safest practice of removing wires from ICDs (pacemakers are exactly the same) in order to allow safe cremation.

Equipment

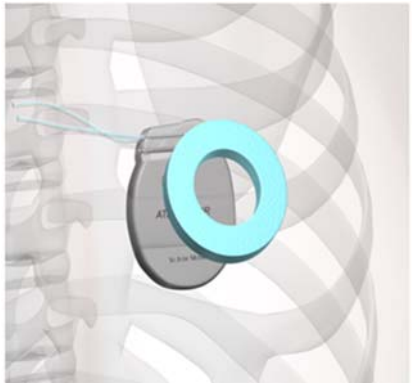
Ring magnet

Hex wrench

ICD generator

Procedure

Ring magnets effectively deactivate ICDs when they are placed over the ICD generator. These will need to be used temporarily when technical staff are removing the ICD generator from the pocket. We suggest the magnet is applied to the skin over the generator and secured with tape in a similar position to that shown below.

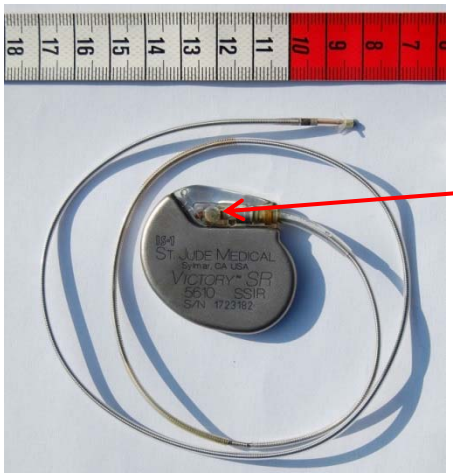


Once the generator has been freed from the pocket, and removed, the device will reactivate, but will not deliver any shocks unless leads have been disrupted. The generator can then be placed back on top of the magnet strapped to the chest and held on the magnet using the non-dominant hand. This will then deactivate it again.

Removing pacing/ICD wires

This requires a hex wrench to unscrew the leads from the header of the device – see images of device and hex wrench below.

Hex wrench



Set screw – each lead will have one of these (perhaps 2 in older models)

To remove the lead, place the hex wrench through the middle of the rubber seal of the set screw. The hex wrench will engage with the screw underneath. Turn anticlockwise for half a turn to a turn. The lead will then be able to be pulled from the device safely.

This should be repeated for each lead until all have been removed. The ICD, which should remain on the magnet, can then be safely removed and stored in

a tied (and, therefore sealed) rubber glove within a container alongside other ICDs to be deactivated by the cardiac physiologists at a later date.

Once the leads have been removed, the device is perfectly safe and will not discharge.

An educational video is available at https://vimeo.com/401285703

Password: Cardio2020

Our recommendation is that leads of ICDs should not be cut due to the risk of the ICD shorting whilst in storage. Pacemakers, which deliver 100-fold lower voltages, will not do this, but we recommend that all devices are managed as above to avoid confusion.

Ring magnets should be available from your Cardiology department or Coronary Care Units.