

# The Implantable Cardioverter Defibrillator

**Table 3.66 – ASSESSMENT and MANAGEMENT of:**

## Patients Fitted with an ICD

ASSESSMENT	MANAGEMENT
<b>If the patient is in cardiac arrest:</b> ● Assess the patient ● Monitor the ECG	<ul style="list-style-type: none"> <li>● Perform basic life support in accordance with current BLS guidelines.</li> <li>● Standard airway management techniques.</li> <li>● IV access (if required) should be used.</li> </ul>
<b>Assess rhythm:</b> Shockable rhythm is present (VF or pulseless VT)	<ul style="list-style-type: none"> <li>● <b>BUT</b> the ICD is not detecting it, perform external defibrillation and other resuscitation procedures according to current resuscitation guidelines.</li> <li>● If the ICD is delivering therapy (whether by anti-tachycardia pacing or shocks) but is failing to convert the arrhythmia, then external defibrillation should be provided, as per current guidelines.</li> </ul>
Non-shockable rhythm	<ul style="list-style-type: none"> <li>● Manage the patient according to current guidelines. If the rhythm is converted to a shockable one, assess the response of the ICD, as in 3.1.2 above, performing external defibrillation as required.</li> </ul>
If a shockable rhythm is converted to one associated with effective cardiac output (whether by the ICD or by external defibrillation):	<ul style="list-style-type: none"> <li>● Manage the patient as usual and arrange further treatment and assessment.</li> </ul>
<b>If the patient is not in cardiac arrest:</b>	<ul style="list-style-type: none"> <li>● Determine whether an arrhythmia is present.</li> </ul>
<b>If no arrhythmia is present:</b>	<p>If therapy from the ICD has been effective, the patient is in sinus rhythm or is paced:</p> <ul style="list-style-type: none"> <li>● Monitor the patient.</li> <li>● Administer oxygen and aim for a saturation of 94–98% (<a href="#">refer to oxygen guideline</a>).</li> <li>● Arrange further assessment to investigate possibility of new myocardial infarction (MI), heart failure, other acute illness or drug toxicity/electrolyte imbalance etc.</li> </ul> <p>An ICD may deliver inappropriate shocks (i.e. in the absence of arrhythmia) if there are problems with sensing the cardiac rhythm or problems with the leads:</p> <ul style="list-style-type: none"> <li>● Record the rhythm (while ICD shocks are delivered, if possible).</li> <li>● Disable the ICD with a magnet.</li> <li>● Monitor the patient.</li> <li>● Arrange further assessment with help from the ICD centre. Provide supportive treatment as required.</li> </ul>
<b>If an arrhythmia is present:</b>	<p>If an arrhythmia is present and shocks are being delivered:</p> <ul style="list-style-type: none"> <li>● Record the arrhythmia (while ICD shocks are delivered, if possible) on the ECG.</li> <li>● Determine the nature of the arrhythmia.</li> <li>● Transport rapidly to hospital in all cases.</li> </ul>
If the rhythm is <b>supraventricular</b> i.e. sinus tachycardia, atrial flutter, atrial fibrillation, junctional tachycardia, etc:	<p>If the patient is haemodynamically stable, and the patient is continuing to receive shocks, disable the ICD with a magnet:</p> <ul style="list-style-type: none"> <li>● Consider possible causes, treat appropriately.</li> </ul> <p>Arrange further assessment in hospital.</p>
If the rhythm is <b>ventricular tachycardia</b> :	<ul style="list-style-type: none"> <li>● Pulseless VT should be treated as cardiac arrest (3.1.2 above).</li> </ul>
	<p><b>If the patient is haemodynamically stable:</b></p> <ul style="list-style-type: none"> <li>● Monitor the patient.</li> <li>● Convey to the emergency department.</li> </ul> <p><b>If the patient is haemodynamically unstable, and ICD shocks are ineffective, treat as per VT guideline.</b></p> <ul style="list-style-type: none"> <li>● An ICD will not deliver anti-tachycardia pacing (ATP) or shocks if the rate of the VT is below the programmed detection rate of the device. Conventional management may be undertaken according to the patient's haemodynamic status.</li> <li>● For recurring VT with appropriate shocks, manage any underlying cause (acute ischaemia, heart failure etc.). Sedation may be of benefit.</li> </ul>