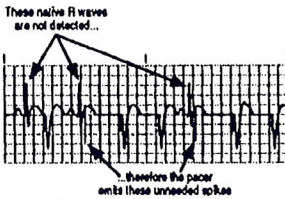
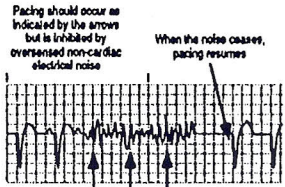
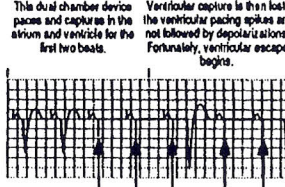


Table 3-6. DEMONSTRATION OF ABNORMAL PACEMAKER FUNCTION RELATED TO UNDERSENSING, OVERSENSING, OR NONCAPTURE

SAMPLE ECG APPEARANCE	SOME POSSIBLE CLINICAL CONSEQUENCES	SOME POSSIBLE CAUSES	CORRECTIVE MEASURES	
<p>UNDERSENSING Device fails to detect existing cardiac depolarizations, therefore competes with the native rhythm</p>		<p>Competition with a native rhythm Stimulation of dysrhythmias ("R-on-T")</p>	<p>Lead disconnected from pacer or from viable myocardium Sensitivity set too low Lead fracture Low battery</p>	<p>Check connection of lead to pacer Increase sensitivity (turn sensing control to a SMALLER number)</p>
<p>OVERSENSING Device detects noncardiac electrical events and interprets them as cardiac depolarizations, therefore is wrongly inhibited from pacing</p>		<p>Pacemaker-dependent patients receive no stimuli from the pacemaker, producing a pause in rhythm and reduction in cardiac output</p>	<p>Electrical potential caused by noncardiac muscle contraction (especially pectorals) is detected and misinterpreted by the device Interference from electrical sources (ungrounded equipment, short circuits) is detected and misinterpreted by the device</p>	<p>Reposition or change lead Change battery Decrease sensitivity (turn sensing control to a LARGER number)</p>
<p>NONCAPTURE Device emits stimuli which fail to depolarize the myocardium</p>		<p>Pacemaker-dependent patients receive no stimuli from the pacemaker, producing a pause in rhythm and reduction in cardiac output</p>	<p>Sensitivity set too high Lead disconnected from pacer or from viable myocardium Output set too low in the noncaptured chamber Lead fracture High pacing threshold due to medication or metabolic changes Low battery</p>	<p>Remove all ungrounded electrical equipment or have it evaluated by hospital engineers Check connection of lead to pacer Increase output in the noncaptured chamber Reposition or change lead Change battery Alter medication regimen, correct metabolic changes</p>

From Witherall CL. Cardiac rhythm control devices. *Crit Care Nurs Clin North Am.* 1994;6:95-102.