A n implantable loop recorder is a long-term cardiac monitoring device that can be implanted in the subcutaneous tissue of the pectoral or axillary areas to aid in discovery of cardiac arrhythmias (Kanjwal et al., 2011). These devices are small and lightweight, and they can be inserted in patients under local anesthesia as an outpatient procedure (Kanjwal et al., 2011). These devices are used to detect abnormal arrhythmias in patients with unexplained syncope. These devices capture paradoxic episodes of atrial fibrillation and may be helpful for patients with unexplained stroke. Nurses should be familiar with safety and care instructions and take precautions surrounding diagnostic testing in patients with these devices. 


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Because of the high numbers of atrial fibrillation-related strokes, diagnosing this arrhythmia when suspected is crucial to secondary stroke prevention. Both persistent and paroxysmal atrial fibrillation increase these risks; however, paroxysmal atrial fibrillation can be difficult to detect (Seet et al., 2011). Numerous studies have examined different ECG monitoring devices in patients with paroxysmal atrial fibrillation contributing to stroke (Seet et al., 2011). Although the implantable loop recorder is not the only effective method, it is gaining popularity with this patient population.

Studies have shown that regardless of the type of ECG monitoring, paroxysmal atrial fibrillation was detected more frequently with long-term monitoring initiated immediately after the ischemic event (Seet et al., 2011). The benefit of using a loop recorder in these patients allows for capture of brief episodes of atrial fibrillation for up to 3 years (Seet et al., 2011). The easy insertion, quick patient recovery time, and prolonged monitoring capabilities make the implantable loop recorder a viable option for these patients.

PATIENT EDUCATION AND SAFETY

Because of the increasing evidence that the use of internal loop recorders aids in identifying undiagnosed atrial fibrillation in patients with unexplained embolic stroke, nurses can...
expect to see an increase in the number of patients who undergo this procedure or who present with the device already implanted. Insertion of the device is typically performed in a procedural area with only local anesthetic, eliminating the need for extensive postprocedure monitoring (Kanjwal et al., 2011). Because the implantation is superficial, basic cleaning and care of the site is appropriate, and pain is minimal (Kanjwal et al., 2011).

Patient education about the device is also essential for effectiveness of the device as well as for patient safety. Patients will have a patient activator device, and they should be instructed to use this device when they feel symptoms such as dizziness, light-headedness, and palpitations, or when they feel as if their heart is racing. Patients should be instructed to carry the activation device, which fits in a pocket or small purse, with them at all times. They also should be educated about the automatic functions of the device so that they understand the device can pick up on abnormalities without patient activation. Patients also should be reassured that they will not feel any abnormal pain or sensation when the device is recording (Medtronic, 2010).

Because the device is metallic and measures electrical activity, patients should be aware that they should use precaution with certain devices and procedures. Wireless devices, such as cell phones and laptop computers, should be kept at least 6 inches away from the implanted device. These devices will not harm patients but may disable the recording and arrhythmia detection functions of the device. The majority of household electronic appliances such as microwaves, radios, and induction cooking surfaces are safe, but prolonged exposure at one time also may decrease the recording and storage capabilities of the loop recorder (Medtronic, 2010).

Most important, patients should be instructed to carry their device identification card with them everywhere they go. Because the device may set off security systems at places such as airports or a courthouse, patients will need to show their identification card. This card also will help health care professionals determine if the device is safe to undergo certain diagnostic tests. After patients have been identified as having an internal loop recorder, communication to all health care team members will help keep patients safe and ensure the device continues to function. Although most loop recorders are compatible with magnetic resonance imaging, patients should be educated that there may be a slight tugging sensation at the site of the implanted device when they enter the imaging suite and that the sensation should stop after the scan starts (Medtronic, 2010).

SUMMARY

The use of implantable loop recorders is an expensive and invasive option, but when used on appropriate patients, these devices may become invaluable in identifying atrial fibrillation and reducing stroke risk (Seet et al., 2011). Overall, implanted loop recorders are fairly benign with few complications. Interactions with medical and household electrical and magnetic devices are safe for the most part, but these electronic devices may decrease the effectiveness of the loop recorder. Although much is still unknown about stroke risk with brief episodes of paroxysmal atrial fibrillation, the use of cardiac monitoring devices in patients with suspected embolic stroke due to undiagnosed atrial fibrillation has proven to be cost effective, which has contributed to their increased use in this patient population (Seet et al., 2011).

REFERENCES

