

The LifeSigns® Systems Micro12 ECG™ Recorder – Case Study

Clinical Application of 12-Lead ECG Monitoring in the Home

Mrs. D. is a 62 year old female, two months post coronary artery bypass grafting. She has been receiving home care for infected leg incisions. She is 5' .0" and weighs 180 pounds. Due to her open and draining leg wounds, compressed disc in her lumbar spine, and previous sedentary lifestyle, she is greatly deconditioned and requires a walker to assist with mobilization. She lives with her husband in a quad-level house that has many steps both inside and outside. She is depressed and has frequent complaints.

During one home visit, Mrs. D complained to the nurse that she had experienced epigastric discomfort that last two nights. She described the discomfort as a tightness similar to the angina that she experienced prior to surgery. She also stated that she received relief from the tightness after taking two sublingual nitroglycerin. The nurse assessed the patient, and found Mrs. D's vital signs stable, no changes in skin color, no extra heart tones, lung sounds clear, all extremities warm, no bruit or jugular venous distention noted. The ECG rhythm strip exhibited normal sinus rhythm with no ST-segment changes, in Lead II. The patient had vegetable soup for the previous dinner and denied any nausea or gastric problems. The nurse, however, noted that the patient had a history of a hiatal hernia.

Mrs. D's physician was contacted by the nurse, and options for follow-up were discussed. Usually the physician asks the patient to come into the office for a 12-lead ECG and medical evaluation, however due to her lack of mobility and awkward physical home lay-out, this was difficult to achieve without an ambulance. The nurse offered to run a 12-lead ECG in the home. Utilizing the Instromedix Micro12 ECG, the nurse ran a 12-lead ECG on Mrs. D. and transtelephonically downloaded the report to her home care agency. The agency office staff immediately faxed it to Mrs. D's physician. The physician read the ECG and diagnosed it as normal. After speaking with the patient, the physician ordered a Histamine H2 antagonist for Mrs. D's epigastric distress. The physician shared with the nurse that Mrs. D had a history of esophageal reflux and hiatal hernia.

Mrs. D. reported no further discomfort that night, or in the future. She and her husband were very happy that they did not have to attempt going to the physician's office. Mrs. D's. physician was pleased that the home care nurse was able to conduct a 12-lead ECG that significantly facilitated the medical evaluation process regarding the patient's treatment plan.

In this case, the Micro12 ECG portability saved the patient energy, effort, and the cost of an ambulance ride. It also provided the physician and nurse the ability to more definitively assess the patient, leading to improved, and more efficient clinical evaluation. While not every patient requires a 12-lead ECG, but this patient did; the Micro12 ECG device allowed her to receive the 12-lead ECG at home rather than making a trip to the physician office or hospital.

**It is recommended in the National Practice Guidelines for the Cardiac Home Care Patient, that patients actively experiencing angina symptoms unrelieved with nitroglycerin, should contact emergency medical services immediately. A 12-lead ECG should be completed in an environment that is equipped to handle cardiac decompensation if it occurs.*

The logo for Instromedix, featuring the word "Instromedix" in a bold, sans-serif font with a registered trademark symbol. Above the text is a curved line that starts under the 'I', arches over the 'm', and ends under the 'x'.

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