GE Healthcare

Case Reports: Tales from the Trenches

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Vscan* helps detect pericardial effusion, enabling prompt initiation of treatment

A 22-year-old male arrived at the Emergency Department around midnight, complaining of chest pain and shortness of breath. It was his second visit to the ED in as many weeks; just 14 days earlier, he had come in with a respiratory infection, which was treated with antibiotics. The patient's malaise and fatigue had continued, however.

He presented the second time in severe distress. He had no nausea, vomiting or fever, but in addition to the chest pain and dyspnea, he had a rash on his extremities. Because his symptoms were worsening, with increasing dyspnea, tachycardia and a rise in blood pressure to 172/102, we decided to perform a bedside ultrasound exam with Vscan.

The study showed moderate pericardial effusion. A surgeon was consulted, and the patient was transferred directly to the main hospital for possible pericardial window.

After his transfer, his condition rapidly deteriorated to cardiac tamponade. However, an emergency pericardial window was successfully performed. The diagnosis ultimately included pericarditis with secondary diagnoses of lupus, pneumonia and sepsis. He was treated for these conditions and discharged to home care without further complications.

High–quality ultrasound, literally at your fingertips.

Emergency Department physicians don't always have immediate access to comprehensive ultrasound exams. The solution? GE Healthcare's pocket-sized Vscan ultrasound device for a quick look.

The Vscan is portable enough to slip into the pocket of a lab coat for on-the-spot evaluations.

In fact, Emergency Medicine physicians are finding that its performance and excellent image quality can help speed diagnosis and initiation of the appropriate treatment, supporting the goals of improving outcomes and streamlining patient management.

Discussion

Vscan enabled our Emergency team to evaluate this patient quickly. After detection of a pericardial effusion we were able to transfer him to a tertiary facility where cardiothoracic surgery backup was immediately available. He was therefore able to avoid the cardiac arrest which could have resulted from cardiac tamponade, and to be treated successfully and without further complications.

If this patient had been admitted to a facility without the ability to perform a pericardial window, he may have died. Fortunately, the Vscan study helped us quickly arrive at the diagnosis and transfer the patient to medical staff equipped to manage his deteriorating condition.

Figure 1: Subxiphoid view of the heart, demonstrating pericardial effusion

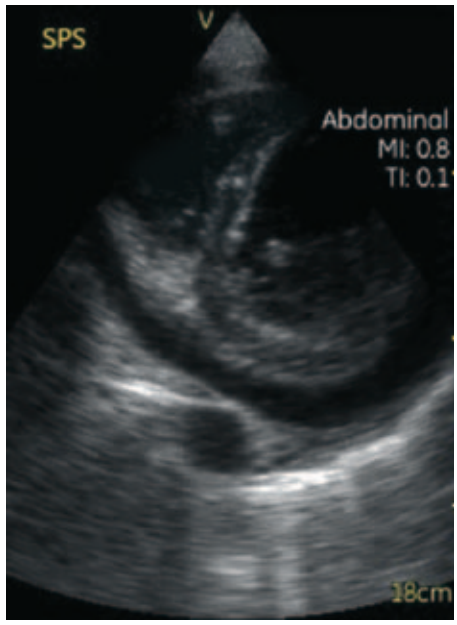

Figure 2: Short Parasternal view of the heart, showing pericardial effusion, surrounding right and left ventricles.

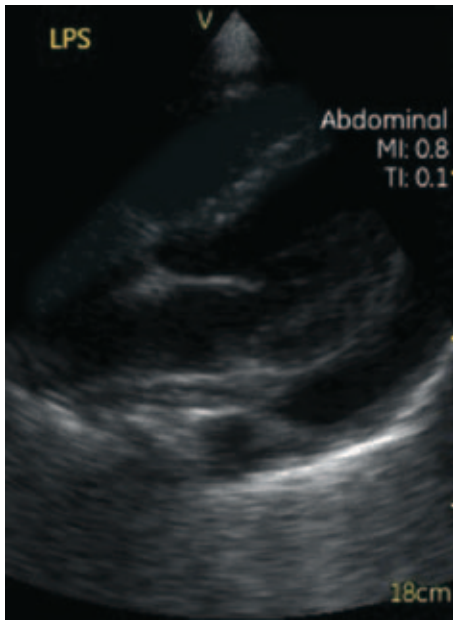

Figure 3: Long Parasternal view of the heart, showing pericardial effusion, surrounding cardiac silhouette

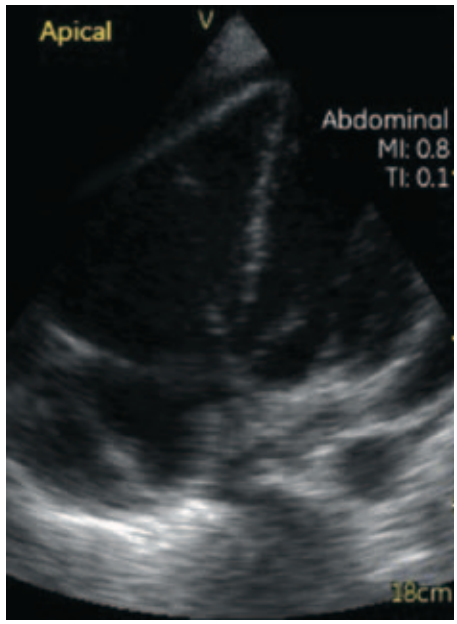

Figure 4: Apical four chamber view of the heart, with anterior and posterior pericardial effusion

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imagination at work

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