

Treating chest pain in the air

By Paulo Magalhães Alves MD

The varying symptoms of heart attack mean that even experienced doctors, who can physically see and talk to their patients, must rely on thorough tests to accurately diagnose such events.

Imagine your crew members having to assess and treat a heart attack during flight. Without the proper tools and technology, the process can be quite daunting. However, with assistance from a telemedicine provider, ground-based emergency doctors can help crews manage the initial emergency to a successful outcome.

Understanding chest pain

Chest pain can arise from the chest structure itself – the muscles and bones – as well as from the internal organs, including the oesophagus, the lungs and the heart, making it difficult to match the symptoms to an accurate diagnosis.

However, because chest pain is a prominent symptom of heart attack, and heart conditions are often life-threatening, doctors usually try to rule out heart attack first, before contemplating other possible causes of chest pain. Even when not fatal, a heart attack can lead to consequences that may compromise an individual's quality of life.

Recognising that time is critical for heart attack victims, today's treatment relies on certain drugs and techniques aimed at restoring the compromised blood flow through the obstructed coronary artery. To avoid permanent damage to the heart muscle, treatment should ideally occur within six hours of the onset of symptoms.

The treatment for less urgent chest pain conditions, such as muscular pain or some lung disorders, can be handled inflight with paracetamol or ibuprofen and with follow-up evaluation upon arrival.

Crew can assist the telemedicine doctor in confirming his or her suspicions by asking the passenger about the



The risk of a heart attack will ordinarily be the first concern when a passenger is suffering chest pain.

character of the pain, its location and intensity and about any precipitating and relieving factors and accompanying symptoms.

Doctors will use crew responses to assess the passenger's chest pain patterns. Chest pressure, tightness or heaviness in the centre or slightly to the left of the chest and associated with nausea, shortness of breath, cold sweats and radiation of discomfort to the left shoulder and arm indicate a heart attack is a real possibility. Many cases, however, will present atypical symptoms such as abdominal, jaw or back pain.

While it is possible for doctors to have a strong suspicion of real heart attack, it is extremely difficult to rule out the possibility, even when there are no typical symptoms. In such situations, a telemedicine doctor may recommend a diversion and will immediately begin seeking out the closest ground-based medical resources. At the same time, s/he may recommend initial medication, such as nitroglycerine, from the aircraft's

medical kit. The advent of medical equipment that records heart rhythms is also making inflight treatment more effective. Data from these remote diagnostic machines is immediately transmitted directly to ground-based doctors.

Even so, observation and repeated examinations are the only ways to truly rule out heart attacks and safely reassure someone suffering from a chest pain episode. ■

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