Medical emergencies during air travel

Aircraft resources and guidelines for 'good samaritan' physicians

Philip H. Goodman, MD

Preview

Since August 1, 1986, all commercial aircraft have been carrying a new and better medical kit mandated by the Federal Aviation Administration. As before, physician-passengers aboard these planes may be requested to evaluate a passenger in distress, and the care they are able to render should in many cases be expanded by use of the new supplies. In this article Dr Goodman reviews the contraindications to air travel, the management of common emergencies occurring during flight, and the limitations inherent in providing medical care aloft.

Air travel may be fast and convenient, but it can also precipitate disturbing and potentially life-threatening disorders in some patients (table 1). Estimates of the number of yearly in-flight deaths range between 20 and 100.[1] The number of nonfatal emergencies is unknown because of incomplete reporting by the airlines.

For a long time the management of in-flight medical emergencies was hampered by the limited medical supplies carried on domestic aircraft. Simple first aid kits and flashlights were the sole requirements prior to Federal Aviation Administration (FAA) amendments that went into effect August 1, 1986.[1] Under the new regulations, all commercial common carriers must maintain a kit containing the medications and devices listed in table 2. The FAA considered the inclusion of a defibrillator and parenteral narcotics, sedatives, and antiarrhythmics but was dissuaded by the testimony of major medical organizations concerned about potential misuse.

Airline documentation of all in-flight emergencies is also required by the new FAA rules. The records will be reviewed after two years' experience with the new kit to determine the need for further modification of the contents.

Prevention

The physician confronts air travel hazards in two ways: (1) a patient with the potential for development of a flight-related disorder may come for medical advice in advance and (2) an emergency may arise on a flight on which the physician is traveling as a passenger. Preferable, of course, is advance recognition of those at high risk, with consequent encouragement not to fly. In fact, the majority of in-flight fatalities befall those debilitated by terminal illness or recovering from a severe acute illness, such as myocardial infarction.

Contraindications to air travel are summarized in table 3. Airlines will review any questionable cases before flight if they are requested to do so (figure 1). Further discussion of this subject can be found elsewhere.[2] Air travel for chronic obstructive pulmonary disease patients has been the subject of recent investigation, and some safety measures have been established (table 4).[3]

Triage at cruising altitude

US commercial airlines are not legally obligated to tend to the medical needs of passengers aboard aircraft. Therefore, the provision of first aid and other resuscitation during flight is voluntary. The only decision the pilot must make in the event of a medical problem is whether or not to divert to the nearest airport that can accommodate the plane. During a domestic flight most aircraft can deliver an ill patient to an airport near a hospital within 40 minutes. The decision to divert is not made lightly, however, because of the inconvenience and monetary expense of disrupted flight schedules. The pilot will generally first seek the voluntary services and advice of a physician passenger.

Volunteer physicians may obtain immediate consultation

continued