

Up in the Air

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I was flying from Newark to New Delhi on a non-stop flight operated by a leading US carrier. The flight was supposed to have taken off from Newark at 2000 hours, but as it was overbooked and the airline officials were trying to accommodate the 'extra' passengers on other flights, we were running behind schedule. In the waiting lounge, the flight crew was offering a compensation of US\$ 700 to passengers who had 'flexible travel plans' and could reschedule their itinerary, so that other passengers could be accommodated on the current flight. Despite the temptation, I decided against it and boarded the plane as they called out the seat number printed on my boarding pass.

It was a Boeing 777 with a capacity of over 300 passengers and we were going to be airborne for a good 17 hours. Sitting beside a nosy neighbour who was cribbing about the virtually absent leg room (in the famous Shashi Tharoor's 'cattle class'), I was desperately seeking some divine intervention to save me from him. With his incessant probing, he had already found out that I was a recent medical graduate pursuing internship. This was followed by the inevitable volley of questions regarding various ailments that the gentleman had ever suffered from. Fortunately, the flight attendants soon served dinner, and that had him busy for a while. As I was just settling in to watch a film on the in-flight entertainment system, there came the characteristic overhead 'ding', followed by a startling; 'Ladies and gentlemen, this is your flight steward. We have a medical emergency on board and would request any doctors on board to please come to the rear of the aircraft.'

While I was still battling a moral dilemma between 'the duty to help' and 'saving my skin', the prodigal neighbour nudged me, 'I guess they want you back there.' The decision had been made! Sheepishly, I got up and started walking towards the rear end of the aircraft.

I had passed my final MB,BS examinations about 10 months ago and was currently doing my compulsory rotatory internship. Although I had been in a hospital long enough, I still lacked the confidence to tackle a real patient independently. Despite having a medical licensure, I was not really sure if I was worthy of putting the 2 letters of the alphabet, of a clinical doctorate, in front of my name yet.

When I reached the rear of the aircraft, some people had already gathered there. One of them introduced himself as an internal medicine resident from China. The other was a consultant radiologist of Indian origin currently practising in the USA. The passenger in distress happened to be a 4-year-old Indian child, who had vomited a couple of times and was not arousable at that point. The radiologist confessed that he was completely out of touch with clinical medicine and the medicine resident cited his ineptitude in dealing with kids. The onus of this child was now on me and having been in paediatrics for the past few weeks, I certainly could not justify pulling out at this hour.

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I started interviewing the grandfather who was accompanying the child. He informed us that the child had eaten some snacks at the airport before boarding the flight. Following take off, the boy had vomited twice and had complained of a headache and abdominal pain. Soon he had become drowsy and fallen asleep. That is when the grandfather had approached the flight attendants for help.

I did a quick physical examination. The boy was not responding to even painful stimuli. He was warm to the touch, had a soft abdomen and skin pinch was returning after a considerable time. They had only an adult-size blood pressure cuff on board. I improvised, tied it around the tiny thigh and felt for the pulse on the anterior tibial. I felt a weak pulse at 50 mmHg as the mercury column descended. Though I was not sure at the moment how reliable this reading was, I sure did know that it was not a good situation. I told the flight attendant that we might need to push in fluids, if they had any onboard. She said that they did, but before we could proceed with any treatment measures, they needed to confirm with their Medlink doctors. (Medlink is a tele-health service of this airline, with doctors stationed in Phoenix, Arizona, USA. The doctors provide assistance to the crew during in-flight emergencies.) I noted all the examination findings on a piece of paper and gave it to the attendant, who took it to the pilot in the cockpit.

As per the instructions of the Medlink team, they advised that the child be given half a tablet of promethazine. We were to then wait for an hour, repeat it if the child vomited and initiate intravenous fluids only if his condition worsened. In the worst case scenario, they advised turning around and 'evacuating' the patient at the nearest US airport. Although their advice was perfectly 'as per the books' and evidence-based, I just could not buy the idea of waiting any more. I knew how skilled (or unskilled) I was and was sure that if at all I could find a vein and cannulate it, that would have to be now. I would not be able to locate a patent vein if the child vomited again and became more dehydrated. Thirty thousand feet above the Atlantic somewhere in between the Americas and Europe, I was probably one of the least competent persons to attempt a cannulation on a dehydrated 4-year-old child.

I expressed my doubts to the crew and they were quick enough to put me directly in touch with the doctors in Arizona. I spoke of my incompetency and the gravity of the situation to the doctors. The other two doctors supported my case. They allowed us to attempt intravenous access in the child. I tried on the antecubital vein and on the wrist, but failed. Even though we were taught that in dire situations, the tibial tuberosity could be punctured and fluids infused directly into the marrow cavity, I did not want to risk osteomyelitis in this child. Before I decided to move on and attempt cannulating the superficial scalp veins, I tried in the other hand and managed to secure a cannula.

We started the child on a slow infusion of normal saline, which was the only fluid available on board. The vitals remained stable thereafter, though not much improvement was recorded. After about 2 hours, the child woke up and was given a crushed

promethazine tablet dissolved in apple juice. He vomited again after a while, but remained wakeful and responsive.

For 9 of the 17 hours on board, the 3 of us remained standing beside the child. When I reflect back on that fateful night, I try to comprehend what went through our minds. Were we scared? Perhaps not. Concerned? Definitely! I cannot speak for the others, but I felt particularly lacking in confidence to deal with such a situation alone. Though medical teaching and internship do teach us the basics of medical practice, they leave a gap somewhere as far as making us independent is concerned. We are becoming increasingly dependent on laboratory investigations, imaging techniques and subspecialization, and we find ourselves helpless in emergency situations such as this.

In medicine, many a time it is difficult to differentiate between the absolutely right and relatively wrong. I believe what we did was definitely not evidence-based, if not irrational. However, the competence of the available health personnel and their on-site assessment should be the criteria for making healthcare decisions. After all, we all are bound by the Hippocratic Corpus to do what is best for the patient depending upon our level of skill.

As far as the law is concerned, in the USA, the Consolidated Omnibus Budget Reconciliation Act, 1985 (COBRA) mandates the provision of emergency medical treatment to the needy by law.¹ To encourage medical professionals to respond to and assist in such emergency calls, the 1998 Aviation Medical Assistance Act gives them the 'good Samaritan' protection against litigation while acting in good faith in such situations.² Indian law, too, recognizes refusal to provide emergency medical care to victims of accidents or those in an emergency medical condition as an offence and does provide for protection from lawsuits against health professionals in case of mishaps while treating such patients.³ But exact laws governing such situations are lacking.

In a study, Gendreau and DeJohn estimated that of an average of 30 in-flight medical emergencies reported on US flights every

day, at least 13%, amounting to 4 per day, were serious enough to require the pilot to change course. The most frequent were cardiovascular emergencies (46%), followed by strokes (18%) and breathing difficulties (6%).⁴ This number is increasing as more elderly passengers fly greater distances.⁵

A Federal Aviation Administration (FAA) study in 1991 found that physician travellers were present during 85% of reported in-flight emergencies.⁶ It is likely that the next time one of us is flying on a long-distance route, a doctor's assistance might be called upon. My humble request would be to respond to this, no matter what. All said and done, our medical training does put us in a slightly better position than the flight crew to deal with such emergencies. Though not all of us would attempt to 'treat a tension pneumothorax with a urinary catheter inserted in the pleural cavity and connected to a water seal of a five-star brandy while aboard a commercial jet liner', the chances are that we might end up doing more good than bad.⁷

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