



TRAVEL MEDI

The Journal of Emporiatrics

CONTENTS

Imported hepatitis

- Robert Steffen, Institute for Social and Preventive Medicine of the University of Zurich, Sumatrastrasse 30, Zurich, Switzerland

Prevention of traveller's diarrhoea: Comparison of different non-antibiotic preparations

- Herwig H Kollaritsch, Peter Kremsner, Gerhard Wiedermann, Institute of Specific Prophylaxis and Tropical Medicine, and Otto Scheiner, Institute for General and Experimental Pathology, University of Vienna, Kinderspitalgasse 15, A-1095, Vienna, Austria

Hepatitis B: Vaccine efficacy

- Richard B Birrer, Mary Lynne Ackley, Gloriann Stover, Division of Medicine, Geisinger Medical Center, Danville, Pennsylvania, USA 18

Hijacking

— S M A Babar, Head of the Departments of Vascular Surgery, Dow Medical College and Civil Hospital, Karachi, Pakistan

Transportation of insects of public health importance on international aircraft

- R C Russell, Senior Lecturer in Medical Entomology in the Department of Public Health, University of Sydney, and Head, Medical Entomology Unit, Department of Infectious Diseases and Microbiology, Westmead Hospital, Westmead, NSW 2145, Australia

Police alarm in prosecuting alcohol-impaired drivers: Ethanol or endogenous acetone?

- Lawrence R Sutton, Executive Director, The Institute for Driver Research and Substance Abuse Inc, PO Box 10345, Pittsburgh, PA 15234, USA

Editorial

General

History is bunk 34, Ticks and deer 34, Conquering onchocerciasis 35, A new antimalarial 35

Nursing

Psychiatric nurse training in Zambia - Jeanette Laird and Belinda Drury 36 40 News 41

Abstracts

Events

Sea 43, Land 44, Infection and Immunisation 44, Miscellaneous 47

ABSTRACTS

Irukandji (jellyfish) syndrome 43 Divers' fundi 43 Lower BAL in Queensland 44 Hepatitis in American soldiers in Korea 44 Dutvfree enteric pathogens 45 Delhi dengue 45 Diarrhoea in travellers and expatriates in Nepal 46 Meningococcal carriage in travellers from Saudi Arabia 46 Not enough chloroquine? 47 Swimming and schistosomiasis 47 Amoebic liver abscess 47 An old treatment of acute mountain sickness 48 Aspirin alert 48.

Hijacking

S. M. A. BABAR

SUMMARY

Commercial airline transport is statistically still the safest mode of travelling and only a tiny fraction of this gigantic transport industry bears the stigma of hijacking.

My purpose is to emphasise the aviation medical disorders relating to the short-term effects of hijacking on a commercial airline passenger. I have avoided making any comments on the moral or legal aspects of hijacking and therefore some of the eye-catching terminology, such as terrorism, sabotage and ransom will be missing. I have found archives literally deplete of information, international agencies secretive about releasing details and the aviation agencies annoyingly silent and so have had to rely heavily on my own experiences and knowledge. The comments therefore are purely personal. Based on a number of selected accounts of various hijackings, the general pattern of a typical hijacking is described here.

Definition and description

Skyjacking or hijacking is an illegal but planned kidnapping of fare-paying passengers on board an aircraft, performed generally by a group of people with political objectives. Considerable planning must go into the final act, since smuggling of firearms and explosives aboard a commercial airliner is an organised project, sometimes achieved with the connivance of the security services or with the active assistance of a misguided passenger or an airline official. Although the main motive is political exploitation (release of prisoners, asylum), there is almost always some financial and personal reward (leadership recognition, title) involved. The political gains mask all others and financial rewards are brushed under the mat by the negotiating parties. It is logic and not philosophy which dictates that the hijackers must try to obtain more than they actually hope to achieve, thus leaving room for bargaining. In every other transport business (shipping, trucking, etc.) only one country is involved and disaster, at worst, is limited and therefore less concession is offered by the rescuing country. In air transport, multinational passengers, the country of aircraft registration, the countries of the aircrew and those under the flight path, the parent country of the airline and of the airport of landing are all involved and have vested interests.

History

The history of hijacking is younger than that of commercial flying. In the late 1960s politically oriented groups sought public recognition of their views and enlisted assistance from the new war fronts. Veterans of the Vietnam war, the commandos of the Middle East, South American activists, promoters of the Irish Republic's cause, and East German refugees, provided technical manpower. There have been pockets of incidents where the primary objective of the hijack has been financial gain but these have now largely been replaced by groups of idealists who seek political gain. More susceptible countries have tighter security at their own airports and therefore their score for hijacking is not very high in their own airspaces. Their aircraft, however, become targets in another country with lax security. Less susceptible western countries may be overworked with greater volume of air traffic, often exercise less security control, and their aircraft are hijacked locally. Thus no country is now immune.

Psychology of a casual passenger

For most passengers a long-planned holiday, an important business trip or returning home to the family are the most frequent reasons for undertak-

S. M. A. BABAR, FRCS, FICA, FRSTMH, D.Av.Med(Eng). Head of the Departments of Vascular Surgery, Dow Medical College and Civil Hospital, Karachi, Pakistan.

ing a commercial flight. Passengers have made long peak-hour journeys to the airport, have not had enough sleep in the preceding night, have natural worries (a sick relative, uncertain business negotiations, immigration clearance) and some are last-minute travellers. These unavoidable factors produce a tense and anxious individual. His or her psychomotor performance would be poor, deductive and decision-making faculties blunted and

reaction time to challenge, below par.

This tense passenger is now confronted with security checks. Although in many ways these should enhance confidence, most passengers recognise that no system is foolproof. This reduces reassurance and adds to the anxiety. The fear of the unknown makes many passengers nervous and jumpy. The hyperkinetic tired individual obtains some solace from being in a large crowd and there is wisdom in assembling passengers in the final departure lounge before boarding. This waiting time is used by the airline for baggage security procedures. Problems arise if baggage is unaccounted for. Some airlines get passengers to identify baggage at the tarmac before loading which slows down the proceedings, and late arrivals often miss their baggage. In airports with conducting tunnels (fingers) leading up to the aircraft cabin from the terminal, this baggage identification system does not work because the routes of entry into the aircraft of passengers and cargo are different. If a passenger is on board then it is unlikely that his baggage may have a dangerous device. An unwary passenger, carrying somebody else's belongings, lends himself to risk. This situation could be misused by a hijacker and an incendiary device could be carried in by the unwary passenger. Aircraft operators tend to and should advertise this fact. Fear of the contents of the other passenger's baggage and airport signs warning public to report unaccompanied baggage, although prudent, do alarm the passenger.

Awareness of hijacking

The popular modus operandi is for the hijackers first to regroup, confirm that a hijacking is 'on' and then to spread out strategically. This means heavy concentration near the cockpit and around the service areas. It has been observed that as soon as the seats belt signs have been switched off, most hijackers visit the toilet, most probably to arm themselves with firearms and explosives. When the appropriate signal has been given, the leader

approaches the cockpit casually without permission and challenges the cockpit crew with his weapon. In the event of non-entry to the cockpit the commonest method has been to display a live grenade to a stewardess and force her to get the captain to open the cockpit door. Once in the cockpit, they issue instructions to the pilot to change to a pre-planned flight path. The group leader usually has first-class knowledge of cockpit instrument panels, understands the bearings, change of direction and fuel capacity, and can monitor the pilot's compliance. The first attempt is to force the pilot to keep flying in the direction of the new destination and ignore queries from ground air traffic control. Within transmitting range of the new destination the pilot is usually forced to announce an emergency, necessitating an urgent landing. On some occasions this tactic works. Usually it fails, because the air traffic controllers (ATCs) recognise technical irregularities and refuse to grant permission. In a well-planned operation, routine activity such as meal service and films goes on, reassuring the passengers that all is well. In the event of the cockpit being forced open, with a stewardess at concealed gun-point, cabin crew activity either ceases or is so clearly altered that front cabin passengers begin to suspect a hijacking. When a stewardess is frogmarched to the cockpit with a live grenade, total panic results.

Panic reaction

Panic develops quickly and shouts and activity alarm those passengers who had missed the earlier activity. The strategically positioned hijackers then spring to action, display their firepower and shout at everyone and force them back to their seats. Passengers are forced to strap up their seat belts and keep their hands resting on top of the seats in front. Since it is foolhardy to try to overpower one or two hijackers while there is someone in the cockpit with live ammunition, the passengers obey their commands.

A panic disorder is said to have developed when any four of the following symptoms are concurrently present: dyspnoea, palpitations, chest pain or discomfort, choking or smothering sensations, dizziness, vertigo or an unsteady feeling, paraesthesiae or tingling in hands or feet, nausea or abdominal distress, hot or cold flushes, sweating, faintness, depersonalisation, trembling or shaking, fear of dying, or fear of going mad or doing

something uncontrolled.

Since grouping of passengers is based mainly on random seat allocations, unfamiliarity of faces causes aloofness and a sense of despair. Fear may be replaced with hysteria in highly strung individuals with hyperkinetic movements and cries. Hijackers may shout even louder than hysterical passengers or may slap them. Even the hijackers are jumpy and all air crew members are made to sit down like passengers. With such panic, it is inevitable that young children may start crying and becoming restless.

Search for a suitable landing

Sooner or later the ATC realises that a hijacking is in progress. The first drill is to deny landing and this is accomplished by either switching off runway lights or by putting up barriers. Other aircraft in the stacking area or in the vicinity are dispersed. The grounded aircraft are immobilised and cordoned off. Radio frequency is kept open and unoccupied.

Most countries do not wish to get involved with a hijacking and only unavoidable reasons (low fuel, inability to go elsewhere) will result in the ATC granting permission to land which is more a political than a humanitarian gesture. With permission come instructions to the life support, safety and security forces. Barricades are removed, lights are switched on and the landing strip is surrounded by security and emergency vehicles. On landing, the aircraft is escorted to a remote bay, away from other aircraft and from refuelling areas. The hijackers collect all passports to establish nationality and religion.

Reaction of passengers

When the hovering comes to an end and the aircraft assumes a landing position most passengers breathe a sigh of relief, as being on the ground is more reassuring and one step closer to freedom. The passengers are unsure of where they are landing and what the demands of hijackers are, but they tend to co-operate.

Events after landing

The drama of hijacking is played to an audience and the press loses no time in disseminating this information. The hijackers concentrate on security and communication. The front cabin is usually emptied and passengers are forced to keep their seat belts on. With the engines cut, the ventilation

Most countries do not wish to get involved with a hijacking and only unavoidable reasons (low fuel, inability to go elsewhere) will result in the ATC granting permission to land which is more a political than a humanitarian gesture. With permission come instructions to the life support, safety and security forces?

system becomes suboptimal, adding to the distress. Occasional drinks of water are allowed through the stewardesses but no additional services. The worry of the hijackers is that, were an escape hatch opened by the aircrew or a passenger, pandemonium, difficult to control, would start. The hijackers cannot be harsh before the breakdown of a negotiation as this could reduce sympathy in the eyes of the world, whilst adverse news reporting could bring disassociation from their own peers. The aim is to immobilise the passengers and to keep their contact with the crew to a minimum. There are always passengers who are medically more susceptible to stress; and occasionally medically unfit passengers sneak into the flight, demand more attention and become a potential liability for the hijackers who would want to get them out of the aircraft before a medical catastrophe develops. Hijackers are also anxious to unload the children, the hysterical and the elderly. Allowing such passengers to go free early in the negotiations enhances the hijackers' standing and tends to soften their tarnished image.

The cockpit and control tower communication is rapidly established and an exclusively designated frequency is used. The hijackers announce whom they represent and demand to speak to a high ranking government official.

Early negotiations

The air traffic controller asks standard questions about the identity of the hijackers and the nature of their demands. It has been observed that hijackers tend to become less communicative after the first few exchanges until senior government members arrive who are conscious of not wanting to provoke the hijackers into committing a rash act. Hijackers are unbalanced and repeated denials of demands become irritating. In a recent hijack, the hijackers earmarked a potential victim and shot him dead in

the empty front cabin so that the passengers remained unaware of the proceedings. It is then clear that the hijackers mean business, the weak-minded hijackers are initiated into the act of killing and government negotiations are speeded up, involving assistance from foreign emissaries with friendlier attitudes to the hijackers' country.

The first bargain

The initial government priority is the safety of the passengers and crew but since some concessions are offered these are publicly denounced by western countries as playing into the hands of the hijackers. The local government is usually under considerable pressure to obtain release of the foreign passengers first. Its own dilemma is its faltering image in front of the voters if many major concessions are offered. Since the hijackers feel that reprisals are more likely if foreign (western) passengers are harmed, these are the first to be released along with elderly women and young children. The initial bargain usually includes some governmental statement to improve the hijackers' image and cause and a provision of food and sanitary facilities, but a request for refuelling is usually denied.

Release of selected hostages, incoming food and supplies

In the eyes of a hijacker, a doctor becomes a spy who will observe firepower and manpower, a cleaner is on a reconnaissance mission, whilst food supplies become drugged with hypnotics. Service personnel who are allowed to enter do so under a visual and manual search system. Usually, ground personnel are only allowed access to the ramp and food and water sampling and checking of trolleys for concealed bugs and weapons for use by the aircrew members are undertaken by the hijackers. During the early phase of negotiations the hijackers may decide that the release of certain passengers may enhance their image. In a Kuwaiti hijack, those western countries who had restrained their criticisms whilst their nationals were on board, vociferously expressed their displeasure as soon as they were freed. The priority list includes children, mothers, the genuinely sick and citizens of other countries who are demanding to control or manage the negotiations. Until some years ago in the Middle East, American and British citizens were often detained by the hijackers but an analysis of recent hijackings has shown that the current trend is to

release these passengers at an early stage. Hijackers prefer a phased release of selected hostages to maintain bargaining power.

Physiological stresses

Muscle pains, dependant oedema of the feet in the elderly and backache due to joint stiffness are common disorders. Infrequent visits to the toilet, psychological inorexia and an improper diet result in constipation and flatulence. Sleep is interrupted, resulting in headaches, mental irritability and a sense of exhaustion. Passengers on medical therapies tend to keep only small supplies in their hand luggage to see them through the flight and, when the supply runs out, those most affected are diabetics, hypertensives and patients on cardiac drugs. In warmer climates where hijacks commonly occur, the cooling system is either inoperative or insufficient and heat, perspiration, lack of moving air, close proximity of another passenger with body odour and improperly worn clothes, add to the discomfort. Cushioned seats tend to conserve heat and cause further misery.

Boredom, mixed emotions and despondency develop. Common sense eventually prevails and most passengers except for the hysterical ones try to calm down as they would not wish to provoke the already tense and jumpy hijackers. Hijackers mistrust the cabin crew (especially the male members) and these are generally relegated to passenger status, leaving the overworked and the nervous air stewardesses to cope with the increasing demands. During the Kuwaiti hijacking the hijackers put considerable emphasis on the flying crew to enable them to move from one airport to another, if and when it suited them. During this hijack, the captain was seen to be 'more captive' than others. Presumably this was a lesson learnt from the earlier Pan American hijacking when the pilot escaped. If there is no pilot available hijackers are likely to demand a replacement due to mistrust, and one option for them is therefore closed to the advantage of the negotiating team.

A peaceful termination of hijacking

It is inevitable that some passengers will subsequently develop a flying phobia. Being strapped to their seats with uncertainty about their future will cause in some passengers the development of claustrophobia. An occasional passenger may have kept a diary and this attracts glamour and publicity in a subsequent autobiography. Other passengers fear that, because they can identify a hijacker, they may become perpetual targets of reprisal should there be a trial. Some passengers successfully pursue claims against the airline's lax security system and others receive compensation for developing a flying phobia.

Storming of the aircraft by security forces

This requires an element of surprise and is a calculated gamble based on tactical diversion of attention; distraction by distant activity, a prearranged dramatised panic attack in a well-briefed crew member, seemingly innocuous activity such as delivery of food, arrival of commandos disguised as cleaning staff or a well-timed deceptive radio announcement from the control tower. All are designed to distract the hijackers' attention while a full scale military style operation is launched. Unfortunately the news media are quick to get hold of such plans of rescue from the parties involved and publicises them. Secrecy, good planning and proper rehearsals are key factors in the success of a rescue operation.

Effects of gunfire

Unless there is surprise and the commandos overpower the hijack leaders quickly, there is an inevitable exchange of fire. Commandos tend to use pistols to limit the damage. The hijackers generally have pistols, revolvers, time-bombs, hand grenades and, as in the Kuwaiti hijack, machine guns as well. During crossfire there may be short range direct hits through the aircraft seats and usually trunk and head injuries are more common. The panic created by the exchange of fire results in mass movement and fleeing passengers may sustain stray bullet injuries. Once gunfire starts, sooner or later the hijackers are subdued.

Escape injuries

Musculoskeletal injuries and blunt injuries to skull and limbs are common. Entanglements with seats, other passengers, falls from escape hatches or ladders, stray bullets, blasts, direct hits and fire are the common causes of injuries.

Damage to the aircraft

Any explosive damage inside the cockpit is disastrous. Fine senstitive instruments become damaged and unreliable in any subsequent flights.

Practical solutions

- There should be one single judiciary to deal with the legal problems relating to the hijack, not subject to local political pressures, with international jurisdiction to which hijackers should be made accountable. It should have powers of extradition and comprise a panel of international jurists. Some countries would react strongly to what they regard as imposition of foreign justice, some would oppose for political gains and others for the sake of opposing. Barring all such obstacles, it ought still to be acceptable to most countries.
- There should be one law enforcement group to deal with hijacking. Generally there is always sufficient time available to fly in this team to the scene of the crisis. This team should have loyalty solely to its assigned task and should owe allegiance to no single country. Decisions can then be taken objectively. Hijackers should be actively pursued to be brought to justice. If found guilty, they should be penalised. Unless this happens manifestly, it will lose its deterrant value for future hijacks.
- The negotiations as well as the rescue operation should be within the sole province of the law enforcement group.
- Security measures should be upgraded. One simple, though tedious, solution could be to inspect virtually all baggage (all suitcases and hand luggage should be fully opened and inspected) and to search all passengers, crew and service personnel before boarding. No exception should be made for this essential procedure.

Acknowledgements: I would like to thank Mr Salik Nazir, Secretary of Health to the Government of Sind who has given me invaluable help, advice and permission for this publication.

I would also like to thank my medical secretary, Miss Tuba Naz for her help in the research and preparation of this manuscript.