JANUARY 1994

Dangers of HIV in aviation. (Institute of Aerospace Medicine and Fernandez Hospital, Buenos Aires, Argentina): "Human Immunodeficiency Virus (HIV)-encephalopathy (formerly AIDS Dementia Complex, or ADC) is characterized by global impairment of intellectual and cognitive functions, personality and behavioral disturbances, decreased memory, inability to concentrate, and apathy… Several scientific reports indicate that ADC may be the earliest, and, at times, the only evidence of human immunodeficiency virus infection, and may present a diagnostic challenge, particularly in the aviation context… Since October 1985, U.S. military pilots have been tested for the presence of HIV antibody and grounded if found positive.

"In May 1991, the Executive Council of the Aerospace Medical Association approved a position statement that supports testing of pilots for infection by HIV, and maintains that 'individuals confirmed to be infected should be found medically disqualified for flying duties.'"[4]

Ballooning crash stats (Johns Hopkins University, Injury Prevention Center, Baltimore, MD): "The 138 [1984-1988 hot-air ballooning] crashes occurred most frequently during recreational flights (51% of the total) and paid rides (28%). A total of 480 persons were involved; 6 were killed and 123 seriously injured. Pilot error contributed to 88% of the crashes, and equipment failure or malfunction to 11% of the six fatal crashes, five involved collision with power lines. Crashes occurring outside optimal flying times accounted for 15% of the total. Pilots with 10 h or less flight time accounted for fewer than expected crashes… Suggested prevention efforts include better training in avoidance of power lines and proper handling of rapid descents; more stringent and frequent flight testing of pilots; and a longer training period before granting pilot certificates… delethalizing balloon crashes and encouraging the use of protective equipment."[2]

JANUARY 1969

In-flight incapacitation (International Civil Aviation Organization, Montreal, Canada): "An analysis of all available [international] information relating to on-'active'-duty deaths of airline pilots, 1961 through April 1968, has disclosed a reasonable certainty that in 5 cases the death or preceding incapacitation was the direct cause of an accident, resulting in a total of 147 fatalities. Deaths of 12 pilots (8 pilots-in-command) which resulted in no accident, but in at least 5 'near misses', were also identified. The record of non-fatal incapacitation in flight of pilots of IATA-member airlines, 1960 through 1966, comprising 42 cases in 24 of which causal organic disease was diagnosed, is reviewed. The results of a world-wide questionnaire survey of pilots of IFALPA member associations, in which 27 percent of some 5,000 respondents reported approximately 2,000 incidents of significant in-flight incapacitation from all causes and assessed the concomitant flight safety decrement, are analyzed. Major interim conclusions reached are that not all fatal air carrier accidents caused or contributed to by pre-existing pilot disease can in fact be recognized as such; that more demanding licensing-medical requirements cannot alone reduce the pilot incapacitation hazard to an acceptable minimum level; and that optimum development and application of the 'fail-safe crew' concept is of prime and increasing importance. Future perspectives are briefly mentioned."[1]

JANUARY 1944

Fatigue among Student Naval Aviators (School of Aviation Medicine, Naval Air Training Center, Pensacola, FL): "The command at the Naval Air Training Center at Pensacola is responsible for certain phases of the instruction of aviation cadets, the majority of whom will eventually become combat pilots…

"That the fatigue experienced by aviators at Pensacola presents a problem worthy of serious consideration is shown by information and intelligence which has come to us from several sources. Thus, an analysis of the medical complaints of pilots over a six-month period revealed that fatigue and related symptoms are not infrequent complaints; medical officers receiving instruction in flying have observed and commented upon the excessive fatigue among students and instructors, alike; officers of the line in charge of flight instruction have recognized the frequent occurrence of overfatigue among flying personnel; physicians living in intimate contact with aviators at Bachelor Officers Quarters have listened to numerous complaints of fatigue; and lastly investigation has shown that some pilots were overfatigued at the time their planes crashed…

"Nearly all of the flight students complained of fatigue and more than half became overfatigued at some stage of primary or intermediate training. Overfatigue usually occurred during the initial or indoctrinational [sic] period in the various training stages. The period of overfatigue averaged 10 days…

"The factors precipitating fatigue and overfatigue may or may not be directly related to flying. The commonest factors are the anxiety associated with a hazardous occupation, long hours of duty, too little sleep and insufficient time for rest and relaxation…

"There is a close relationship in certain cases between overfatigue and anxiety neurosis."[3]

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