JULY 1993

Nontraumatic mass casualty (Medical Department, USS Forrestal*):* "An aircraft carrier experienced 777 cases of acute gastroenteritis while deployed in the eastern Mediterranean over a 16-d period. These cases were noted in the 5,000-man crew, suggesting a cumulative incidence rate of 15%, though many sailors did not seek medical care for their symptoms. The onboard medical department response included epidemiological investigation with unique shipboard facility considerations, development of a treatment plan, and implementation of preventive/educational programs… Flight surgeons and operational medicine physicians must have a solid foundation in general preventive medicine to fulfill their responsibilities…

"The ship's commander displayed considerable interest in the outbreak… Initially, his interest centered on the possibility of a shipboard cause of the outbreak, which would have reflected negatively on the command. The medical department's epidemiological analysis resolved these concerns... The medical department responded with a shipwide education program discussing possible etiologies, reassuring personnel of the proper monitoring, and emphasizing handwashing…

"The response required large quantities of onboard supplies and reallocation of personnel. Intravenous fluids were considered particularly useful. Even with a cumulative attack rate of 15%, the ship was able to maintain function. The flight surgeon or other operational physician must be aware of the implications for infectious disease mass casualty situations, particularly from gastroenteritis. He or she must be ready to conduct epidemiological investigation, provide for therapeutic response, and implement preventive measures to limit morbidity and mortality in response to these situations."[1]

JULY 1968

Identification of mishap victims (USAF School of Aerospace Medicine, Brooks Air Force Base, TX, and USAF Hospital Chanute, Chanute Air Force Base, IL): "Positive identification of victims of mass casualty situations is essential. In the future the number of victims in aircraft accidents is likely to be greater, and the victims may become more difficult to identify than at present. New methods must be developed. The use of panoramic radiographs and intraoral photography is suggested for both premortem and postmortem records…

"The United States Air Force has already started a program in which it performs an initial dental examination on basic airmen with a Panorex-Polaroid picture combination. These two films are inserted in the dental record and form a good baseline survey of the individual's dental condition when he enters the Air Force. It would be advantageous if a panoramic radiograph and Polaroid picture could be taken on all individuals in the military – especially those who do a considerable amount of flying…

"Panoramic radiography or color photography is not necessarily the panacea. Even with their use, visual inspection of the teeth and supporting structures will be necessary in many cases. Many times the premortem and postmortem records will not be identical, and questions will arise as to absolute verification of identity. Further complications are inevitable because, at the present time, no panoramic machine is portable enough to take directly to the scene of a disaster."[2]

JULY 1943

First jump, highest jump (U.S. Army Air Corps): "A parachute jump from 40,200 feet, one of the highest on record, was made by Lieutenant Colonel William Randolph Lovelace II, near Ephrata, Washington, on June 24, 1943 to test oxygen equipment developed under his supervision for the Office of the Air Surgeon, Army Air Forces, the War Department announced. It was his first parachute jump."[4]

Hypoxia training (School of Aviation Medicine, Pensacola, FL): "The flight student beginning his training in military aviation should be made oxygen-conscious as early in his career as possible, and he should not be permitted to lose that awareness of the need for oxygen in present-day aircraft operation…

"What are the conclusions we can draw from watching almost 6,000 flight students being indoctrinated in the use of oxygen equipment in the low pressure chamber? It is apparent…that the one indoctrination flight is insufficient to teach adequately the need for the use of oxygen and the operation of the oxygen equipment. This we have had proved to us by the manner in which the 1,100 cadets have conducted themselves during their second low pressure chamber 'flight,' for the purpose of high altitude tolerance classification. During the two to three month interval since their indoctrination, some seem to have forgotten most of what was taught them. They are not at all 'mask conscious' and will often place the mask upon their face upside down and wonder why it does not fit. The mechanism by which the apparatus operates, although explained twice at indoctrination and again reviewed at the time of classification, is still not clear to them, as is evidenced by an inability to explain it themselves when asked to do so."[3]

REFERENCES

1. Bohnker B, McEwen G, Feeks E, Palombaro J. Explosive outbreak of gastroenteritis on an aircraft carrier: an infectious disease mass casualty situation. Aviat Space Environ Med. 1993; 64(7):648–650.
2. Jerman AC, Tarsitano JJ. Clinical aviation and aerospace medicine: the identification dilemma. Aerosp Med. 1968; 39:751–754.
3. Smedal HA. Observations on the results of indoctrination of aviation personnel in the use of oxygen equipment in the low pressure chamber at Pensacola, Florida. J Aviat Med. 1943; 14(4):206–210.
4. War Department – Army Air Forces. Jump of 40,200 feet by AAF medical officer. J Aviat Med. 1943; 14(4):223–225.

This column is prepared each month by Walter Dalitsch III, M.D., M.P.H. Most of the articles mentioned here were printed over the years in the official journal of the Aerospace Medical Association. These and other articles are available for download from Mira LibrarySmart via https://submissions.mirasmart.com/asmaarchive/Login.aspx.

DOI: https://doi.org/10.3357/AMHP.5156.2018