

MEDICINE

Aorta Ruptures in Crashes

► CAUSE OF death in a third of the victims of air-crashes may be rupture of the aorta, biggest artery of the body that comes directly from the heart.

This very unusual injury was the cause of death of eight of 28 victims of one big airliner crash, a pathologist, Dr. Donald Teare, of St. George's Hospital Medical School and St. Bartholomew's Hospital Medical College in London, found when he performed the post mortem examinations on the bodies of the victims.

Ruptured aorta due to an injury is so rare as a cause of death that Dr. Teare had seen it only three times in 25,000 post mortem examinations, and one of these three was the radio operator of another plane that had crashed.

Broken ribs, disruption of chest muscles, broken spines, and tears and bruising of the liver were found with the ruptured aortas.

These injuries, in Dr. Teare's opinion, were caused by acute bending of the body

over the safety-belt. A similar mechanism could well have accounted for the findings in the eight victims who died of tears of the heart, lungs, liver or spleen.

Injuries of these types, he believes, might have been avoided if the passengers had been sitting with their backs "to the engine" and supported by cushioned upholstery.

Sitting in the tail of the plane may also lessen the chance of serious injury or death in event of a crash, he suggests. This is borne out by the escape of a steward in one crash he reports and a stewardess in another, both of whom were in their "correct positions in the tail of the aircraft."

Although in one of the crashes the plane burned, Dr. Teare's findings showed that all the victims were either dead before the fire broke out or were unconscious and lived only a matter of seconds in the fire.

Dr. Teare reports his findings in the *BRITISH MEDICAL JOURNAL* (Sept. 22).

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RADIO

Radar Tracks Rockets

► AS TEST rockets roar through the sky above White Sands Proving Ground in New Mexico, radar experts are learning how to protect the country from enemy guided missiles.

This is an important by-product of the necessity of keeping track of the rockets as they travel more than 100 miles into the sky. The job of stalking the guided missiles is told by two Aberdeen Proving Ground scientists, Dr. Dirk Reuyl and L. G. de Bey in the magazine *ORDNANCE* (Sept.-Oct.).

All kinds of telescopes, most of which take pictures, and many kinds of radar equipment are used to keep track of the rockets from the moment of takeoff until the final landing. For safety's sake, a series of radars tracks the rocket and can predict its point of impact with the earth. If the rocket is straying outside of the range, it can be exploded in the air before it lands.

Although it was not stated in the article, it does not take much imagination to visualize a little additional equipment designed

to pick up an enemy rocket. It can then be tracked with great precision with some of the equipment now in use at the White Sands Proving Ground.

Right now, detailed records are needed of the flights of these test rockets. An electronic telemetering system in the rocket samples 30 different measuring instruments 30 times a second and transmits the data to the ground. Another system, based on frequency modulation, transmits up to 14 continuous measurements back to the earth-bound scientists.

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