NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

October 24, 2018

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Chief Medical Officer

A. ACCIDENT: ERA18FA006; Front Royal, VA

On October 7, 2017, about 1345 eastern daylight time, a Piper PA-25-235, N90866, was destroyed when it impacted terrain during initial climb from Front Royal-Warren County Airport (FRR), Front Royal, Virginia. The airline transport pilot was fatally injured. The airplane was operated by the Skyline Soaring Club as a glider-tow flight conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the local flight.

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

1. Purpose

   This investigation was performed to evaluate the pilot for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

2. Methods

   The FAA medical case review and blue ribbon medical file, autopsy report, toxicology findings, personal medical records, and the investigator's reports were reviewed.

   FAA Medical Case Review and Blue Ribbon Medical File

   According to the FAA medical case review and blue ribbon medical file, the 76 year old male pilot had reported 11,953 total hours of flight experience as of his last aviation medical exam, dated 10/1/2015. At that time, he was 71 inches tall and weighed 190 pounds. Over the years, the pilot had reported having hypertension and high cholesterol. At his last exam he reported having been diagnosed with coronary artery disease in

2015. He reported using atorvastatin (a cholesterol lowering drug also known as Lipitor), lisinopril (a blood pressure medication also commonly known as Zestril), and metoprolol (a blood pressure medication also used to prevent heart attacks commonly known as Toprol or Lopressor). These drugs are not considered impairing.

A review of the pilot's cardiac catheterization information was performed by the FAA. It demonstrated non-critical stenoses including one area of 30-40% stenosis and another described as 40-50%. No procedural intervention had been performed. The FAA allowed the AME provided second class medical certificate to stand. limited by a requirement to wear corrective lenses.

Autopsy

According to the autopsy performed by the Office of the Chief Medical Examiner, Manassas, VA, the cause of death was blunt force trauma and the manner of death was accident. The heart weighed 560 grams; this was enlarged. Average heart weight for a 190 pound man is 367 grams with a range of 278 to 484 grams.[1] In addition, there was mild to moderate atherosclerosis, described as 50% stenosis in the proximal and 75% stenosis in the distal right coronary artery as well as 50% stenosis in the left anterior descending coronary artery. The remainder of the cardiac exam was unremarkable and no other natural disease was identified.

Toxicology

Toxicology testing performed by the Commonwealth of Virginia Department of Forensic Science Office was negative for all tested-for drugs and alcohols.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified atorvastatin in the pilot's blood.

Personal Medical Records

Review of the pilot's personal medical records including his most recent cardiac catheterization were obtained and reviewed. They revealed the pilot had previously been diagnosed with hypertension, high cholesterol, and non-occlusive coronary artery disease diagnosed by cardiac catheterization in 2004. He was followed by annual cardiac calcium scoring and when his results increased significantly (in early 2015), he underwent a thalium stress test that demonstrated transient ischemic dilation. This led to the cardiac catheterization (described in the FAA section above).

[1] Kitzman DW, Scholz DG, Hagen PT, Ilstrup DM, Edwards WD. Age-related changes in normal human hearts during the first 10 decades of life. Part II (Maturity): A quantitative anatomic study of 765 specimens from subjects 20 to 99 years old. Mayo Clinic Proc., 1988. 63(2): 137-46.

In addition, the pilot had undergone an echocardiogram in July 2017 which demonstrated essentially normal cardiac function.

D. SUMMARY OF MEDICAL FINDINGS

The 76 year old male pilot had a long history of hypertension and high cholesterol that he had reported to the FAA. He had not reported his coronary artery disease to the FAA until 2015 but cardiac catheterization demonstrated it was still non-occlusive and mild to moderate in extent. To control his diseases, he reported using atorvastatin (a cholesterol lowering drug also known as Lipitor), lisinopril (a blood pressure medication also commonly known as Zestril), and metoprolol (a blood pressure medication also used to prevent heart attacks commonly known as Toprol or Lopressor). These drugs are not considered impairing.

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Toxicology testing in two laboratories identified only atorvastatin in the pilot's blood.