NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

November 23, 2018

Mary Pat McKay, MD, MPH
Chief Medical Officer

A. ACCIDENT: ANC18FA024: Chuckanut, WA

On February 12, 2018, about 1913 pacific standard time, a M20K Mooney airplane, N123JN, was destroyed after impacting terrain on Chuckanut Mountain near Bellingham, Washington, while on a visual flight rules (VFR) approach to Bellingham International Airport (BLI). The private pilot sustained fatal injuries. The airplane was registered to Flying Llama LLC and operated by the pilot as a 14 Code of Federal Regulations Part 91 visual flight rules personal flight. Night visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The flight departed Harvey Field (S43), Snohomish, Washington, at about 1851, and was destined for BLI.

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, autopsy report, toxicology findings, and the investigator's reports were reviewed.

   FAA Medical Case Review

   According to the FAA medical case review, the 61 year old male pilot had reported 700 total hours of flight experience as of his last aviation medical exam, dated 10/13/2016. At that time, he was 75 inches tall and weighed 267 pounds. As of his last exam, the pilot had reported hay fever, a history of a single episode of atrial fibrillation, high blood pressure and sleep

apnea treated with CPAP to the FAA. He reported using losartan to control his blood pressure.[1] This drug is not considered impairing. No significant abnormalities were identified on the exam and the aviation medical examiner initially issued a third class medical certificate.

However, the FAA requested additional information which documented that after his last exam the pilot had been evaluated again by cardiology. An exercise stress test identified anterolateral ischemia and in March 2017 a stent was placed in the proximal left anterior descending (LAD) coronary artery where a 70-80% stenosis was identified. A more distal 50-60% stenosis in the LAD and mild disease elsewhere was also noted. A repeat stress test in June 2017 did not identify any ischemia. Following the procedure, the pilot began taking additional medications: atorvastatin to control his cholesterol, aspirin to prevent a heart attack, and clopidogrel to prevent the stent from clotting.[22][3] These medications are not considered impairing. In addition, a review of the pilot's CPAP use 11/16/2016 showed 100% usage. As a result of this information, the pilot's medical certificate was converted to a special issuance third class certificate limited by a requirement for corrective lenses and marked, "Not valid for any class after 10/31/2018."

Autopsy

According to the autopsy performed by the Whatcom County Medical Examiner, the cause of death was massive trauma and the manner of death was accident. The brain was not available for examination due to the extent of injury.

The heart demonstrated severe atherosclerotic and hypertensive disease. It weighed 505 grams. (Average heart weight for a 265 pound man is 429 grams with a range of 325 to 566 grams.[4]) There was concentric left ventricular hypertrophy with myocardial thickness of 2.1 cm. (Average is 1.3 cm.[4]) This hypertrophy is most commonly the result of chronic hypertension. The proximal left main coronary artery had estimated 30-40% stenosis and the distal left anterior descending was described as completely occluded (no visible lumen) but without identified thrombus.

---

[1] National Institutes of Health. US National Library of Medicine. DailyMed. Losartan. https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=3cdcf8cc-4964-4c53-e054-00144ff88e88 Accessed 11/23/2108.

[22] National Institutes of Health. US National Library of Medicine. DailyMed. Atorvastatin. https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=6ccdb6f3-22c7-5b48-46bc-ce4a4c65eb4d Accessed 11/23/2018.

[3] National Institutes of Health. US National Library of Medicine. DailyMed. Clopidogrel. https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=edae8df1-caf9-ff72-1304-5ae8b355f8e7 Accessed 11/23/2018.

[4] 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 right coronary artery showed skip lesions with estimated 30% luminal narrowing and the circumflex coronary artery showed estimated 30-40% narrowing. However, there was no evidence of scarring and the microscopic evaluation did not demonstrate previous ischemia.

According to the autopsy, a blood drug screen by the Washington State Toxicology Laboratory was negative for amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine metabolite, opiates, PCP, methadone, and tricyclic antidepressants.

Toxicology
Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory performed only on kidney and muscle (limited specimens were available) did not identify any tested-for substances.

D. SUMMARY OF MEDICAL FINDINGS

The 61 year old male pilot had previously reported having hay fever, a history of a single episode of atrial fibrillation, high blood pressure and sleep apnea treated with CPAP. After his last aviation medical exam, coronary artery disease was identified and he had a stent placed in the proximal left anterior descending coronary artery. As of June, 2017, he had no ischemia identified on a stress test. At that time, he was using CPAP for sleep apnea during 100% of sleep periods and taking losartan for his blood pressure, clopidogrel for his stent, aspirin to prevent a heart attack, and atorvastatin for cholesterol. These medications are not considered impairing. His last medical certificate was issued in October 2017 and was limited to one year.

According to the autopsy performed by the Whatcom County Medical Examiner, the cause of death was massive trauma and the manner of death was accident.

The heart demonstrated severe atherosclerotic and hypertensive disease. I weighed 505 grams. (Average heart weight for a 265 pound man is 429 grams with a range of 325 to 566 grams.) There was concentric left ventricular hypertrophy with myocardial thickness of 2.1 cm. (Average is 1.3 cm.1) The proximal left main coronary artery had estimated 30-40% stenosis and the distal left anterior descending was described as completely occluded (no visible lumen) but without identified thrombus. In addition, the right coronary artery showed skip lesions with estimated 30% luminal narrowing and the circumflex coronary artery showed estimated 30-40% narrowing. However, there was no evidence of scarring and the microscopic evaluation did not demonstrate previous ischemia.

Toxicology testing in two labs did not identify any tested-for substances.