



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

November 8, 2019

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Chief Medical Officer

A. ACCIDENT: CEN19FA053; Salem, SD

On January 13, 2019, about 1425 central standard time, a Piper PA28 181 airplane, N75191, impacted terrain about 6 miles south of Salem, South Dakota. The private pilot, the only person on board, was fatally injured and the airplane was substantially damaged. The airplane was owned and operated by the pilot as a Title 14 Code of Federal Regulations Part 91 personal flight. Day visual meteorological conditions prevailed in the area and no flight plan was filed for the cross-country flight that originated from the Mitchell Municipal Airport (MHE), Mitchell, South Dakota, and was destined for Mary Skie-Lincoln County Airport (Y14), Tea, South Dakota.

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, FAA blue ribbon medical file, FAA airman file, autopsy report, toxicology findings, personal medical records, ATC recording, and the investigator's reports were reviewed. Relevant regulation and medical literature were reviewed as appropriate.

FAA Medical Case Review and Blue Ribbon Medical File

According to the FAA medical case review and blue ribbon medical file, the 69 year old male pilot had reported 2,250 total flight hours as of his last medical exam, dated 10/05/2016. At that time, he was 75 inches tall

and weighed 218 pounds. He had a Statement of Demonstrated Ability (SODA) issued in 1983, for defective distant vision and had reported longstanding hypertension and neck pain to the FAA. At the time of his last exam, he reported using a combination of valsartan and amlodipine marketed with the name Exforge to treat his blood pressure and tamsulosin (commonly marketed as Flomax) to treat symptoms of an enlarged prostate.^{1,2} None of these drugs are considered impairing. No significant abnormalities were identified on the physical exam and he was issued a third class medical certificate limited by a requirement he wear corrective lenses. This certificate expired 10/31/2018. According to the pilot's FAA airman file, he had not applied for BasicMed.

Autopsy

According to the autopsy performed by the Sanford Health Pathology Clinic, the cause of death was multiple blunt force injuries and the manner of death was accident. There was extensive damage and most of the brain was not available for examination. In addition, coronary artery disease including 80% stenosis of left anterior descending coronary artery and 50% stenosis of right coronary artery was identified. There was no abnormality of the myocardium on the gross visual examination, but the microscopic evaluation found an area of contraction band necrosis in the interventricular septum. The pathologist diagnosed the pilot with an acute myocardial infarction (heart attack).

Toxicology

Toxicology testing performed by the FAA's Forensic Science Laboratory identified valsartan, ranitidine, and amlodipine in muscle. Valsartan and amlodipine were also found in liver. No blood was available for analysis.

Medication Descriptions

Valsartan is a prescription blood pressure medication described above. Ranitidine is a heartburn medication available over the counter; it is commonly marketed with the name Zantac.³ Amlodipine is another blood pressure medication described above. None of these are considered impairing.

Personal Medical Records

Personal medical records from the pilot's usual source of care were obtained for the period from January 2016 through the accident date. They

¹ National Institutes of Health. US National Library of Medicine. DailyMed. Exforge. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=d0caec89-96ec-411d-a933-63eda74a6da7> Accessed 11/8/2019.

² <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=339c3b57-a339-4578-bfd7-46b25d911ff6> Accessed 11/8/2019.

³ National Institutes of Health. US National Library of Medicine. DailyMed. Ranitidine. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c79c92e0-1e7b-4854-a99a-1a22eed3c333> Accessed 11/8/2019.

demonstrate the pilot had well controlled hypertension, and occasional visits for respiratory infections. His blood pressure was treated with the Exforge he reported to the FAA and he was also taking a baby aspirin a day.

Of note, on a visit dated 10/10/2018, the pilot requested his primary physician fill out the FAA physician attestation form for BasicMed (FAA 8700-2) and the physician did so, attesting to the pilot's ability to safely operate an aircraft. The records also included the history form filled out by the pilot during this process.

ATC Conversation

Soon after achieving cruise flight, the pilot reported to ATC that he was experiencing severe chest pain and intermittently having trouble maintaining control of the airplane. The controller attempted to assist the pilot in finding a place to land, but then lost contact with the pilot.

D. SUMMARY OF MEDICAL FINDINGS

The 69 year old pilot had reported chronic high blood pressure controlled with medication, to the FAA. In addition, he held a Statement of Demonstrated Ability (SODA) issued in 1983, for defective distant vision. His third class medical certificate, limited by a requirement he wear corrective lenses, expired 10/31/2018. However, it appears he had completed the physician attestation requirement for BasicMed but had not forwarded it to the FAA.

According to the autopsy performed by the Sanford Health Pathology Clinic, the cause of death was multiple blunt force injuries and the manner of death was accident. In addition, severe coronary artery disease including 80% stenosis of left anterior descending coronary artery and 50% stenosis of right coronary artery was identified. There was no abnormality of the myocardium on the gross visual examination, but the microscopic evaluation found an area of contraction band necrosis in the interventricular septum. The pathologist diagnosed the pilot with an acute myocardial infarction (heart attack).

Toxicology testing performed by the FAA's Forensic Science Laboratory identified valsartan, ranitidine, and amlodipine in muscle. Valsartan and amlodipine were also found in liver.

The pilot made a radio call to air traffic control complaining of severe chest pain and intermittent difficulty controlling his airplane before contact was lost.