

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



CEN22FA376

MEDICAL

Specialist's Factual Report

July 10, 2023

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A. ACCIDENT

Location: Centennial, Colorado
Date: August 9, 2022

B. MEDICAL SPECIALIST

Specialist Turan Kayagil, MD, FACEP
National Transportation Safety Board
Washington, DC

C. DETAILS OF THE INVESTIGATION

1.0 Purpose

This investigation was performed to evaluate the pilot for potentially impairing substances and potentially impairing medical conditions.

2.0 Methods

The Federal Aviation Administration (FAA) medical case review and the pilot's autopsy and toxicology reports were reviewed. Selected investigator reports and relevant regulation and medical literature were also reviewed.

D. FACTUAL INFORMATION

1.0 FAA Medical Case Review

According to the FAA medical case review, the 57-year-old male pilot's last aviation medical examination was on June 14, 2022. At that time, he reported 254 total civilian flight hours. He was 73 inches tall and weighed 235 pounds. He reported using the medication loratadine (a non-sedating antihistamine medication available over the counter for treatment of seasonal and environmental allergy symptoms and hives) and fish oil supplements, neither of which is generally considered impairing. He reported a history of right eye amblyopia (lazy eye); according to the medical case review, his FAA medical certification file contained a 2017 Letter of Eligibility and a 2017 Statement of Demonstrated Ability (SODA) for this condition.¹ No significant issues were identified at the pilot's last aviation medical examination, and he was

¹ The FAA may grant a pilot a SODA when the pilot's disqualifying condition has been determined to be static or nonprogressive and when the pilot has been found capable of performing airman duties without endangering public safety. A SODA does not expire and authorizes an AME to issue a medical certificate of a specified class if the AME finds that the condition described on the SODA has not adversely changed. Additional information about the SODA process is available on the [FAA AME Guide website](#).

issued a third-class medical certificate limited by a requirement to wear corrective lenses for near and distant vision.

2.0 Autopsy

The Douglas County Coroner's Office performed the pilot's autopsy. According to the pilot's autopsy report, his cause of death was multiple injuries and his manner of death was accident. His autopsy identified evidence of atherosclerotic and hypertensive cardiovascular disease. Specifically, he had severe coronary artery disease with greater than 95% narrowing of the right coronary artery and up to 60% narrowing of the left anterior descending coronary artery by plaque. No coronary artery thrombus or heart muscle scarring from old heart attack was identified. The autopsy report described the heart as mildly-to-moderately dilated; heart weight was 430 grams (upper limit of normal for a male of body weight 235 pounds is roughly 530 grams), and thicknesses of the left and right cardiac ventricular walls and interventricular septum were 1 cm (normal is roughly 0.9-1.6 cm), 0.3-0.4 cm (normal is roughly 0.2-0.6 cm), and 1 cm (normal is roughly 1-1.8 cm), respectively.² The autopsy report also noted the presence of mild aortic atherosclerosis and benign kidney changes of a type often associated with chronic high blood pressure (a reported past medical history of high triglycerides was also documented). The autopsy examination did not identify other significant natural disease.

3.0 Toxicology

The FAA Forensic Sciences laboratory performed toxicological testing of postmortem specimens from the pilot.³ This testing detected desloratadine and famotidine in cavity blood and urine. Desloratadine is a non-sedating antihistamine that is an active metabolite of loratadine (see pilot's reported medications in D.1.0 above) and is also available as a prescription medication with similar uses as loratadine.⁴ Famotidine is an over-the-counter stomach acid suppression medication.⁵ Desloratadine/loratadine and famotidine are not generally considered impairing.

² 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 Clin Proc.* 1988;63(2):137-146. doi:10.1016/s0025-6196(12)64946-5.

³ The FAA Forensic Sciences laboratory has the capability to test for around a thousand substances including toxins, prescription and over-the-counter medications, and illicit drugs.

⁴ National Institutes of Health National Library of Medicine. Clarinex. DailyMed. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c671342e-69a2-4ca5-abc2-8166ed4240d4>. Updated November 14, 2022. Accessed July 10, 2023.

⁵ National Institutes of Health National Library of Medicine. Pepcid AC Original Strength. DailyMed. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=54f4086f-e443-4e7e-8c7e-94e152e1c256>. Updated March 27, 2023. Accessed July 10, 2023.

According to the pilot's autopsy report, the Coroner's Office also requested that NMS Labs perform toxicological testing of cavity blood from the pilot, and this testing did not detect any tested-for substances.

E. SUMMARY OF MEDICAL FACTS

The 57-year-old male pilot's last aviation medical examination was on June 14, 2022. At that time, he reported using loratadine and fish oil supplements. He reported a history of right eye amblyopia (lazy eye); in 2017 the FAA had granted a Statement of Demonstrated Ability for this condition. At the pilot's last aviation medical examination he was issued a third-class medical certificate limited by a requirement to wear corrective lenses for near and distant vision.

According to the pilot's autopsy report, his cause of death was multiple injuries and his manner of death was accident. His autopsy identified severe coronary artery disease with greater than 95% narrowing of the right coronary artery and up to 60% narrowing of the left anterior descending coronary artery by plaque. No coronary artery thrombus or heart muscle scarring from old heart attack was identified. The autopsy report described the heart as mildly-to-moderately dilated; heart weight and right ventricular wall thickness were normal, while the thicknesses of the left ventricular wall and interventricular septum were low-normal. The autopsy examination did not identify other significant natural disease. Postmortem toxicological testing did not identify any substances likely to have impairing effects.

Submitted by:

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