

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



CEN22LA164

MEDICAL

Specialist's Factual Report

December 8, 2022

A. ACCIDENT

Location: Kerrville, Texas
Date: 3/31/22
Time: 11:00 local
Airplane: Mooney M20E; N21BS

B. MEDICAL SPECIALIST

Specialist Michelle Watters, MD, PhD, MPH
National Transportation Safety Board, RE-1
Washington, DC

C. DETAILS OF THE INVESTIGATION

Purpose

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

Methods

The Federal Aviation Administration (FAA) medical case review and the pilot's autopsy and FAA toxicology¹ reports were reviewed. No pre-event and post-accident personal medical records were available for review. Other relevant medical and regulatory issues were reviewed.

D. FACTUAL INFORMATION

1.0 Pilot

1.1 FAA Medical Case Review

According to the FAA medical case review, at the time of the accident, the 71-year-old male pilot was on BasicMed (8/18/20). At the time of the most recent exam (8/31/16), the pilot reported taking pitavastatin for high cholesterol, olmesartan for high blood pressure, and levothyroxine for low thyroid function. He was issued a third class medical certificate with special issuance for left macular pucker with a small visual defect, glaucoma suspect, and use of medication. He was CACI (Conditions AMEs (Aviation Medical Examiners) Can Issue) qualified for glaucoma, hypertension,

¹ The FAA Forensic Sciences Laboratory has the capability to test for more than 1,300 substances including toxins, common prescription and over-the-counter medications, and illicit drugs.
<https://jag.cami.jccbi.gov/toxicology/>

hypothyroidism, and prostate cancer. All special issuances and authorizations expired in 2018.

1.2 Autopsy

According to the Travis County Medical Examiner, Austin, Texas autopsy report, the cause of death in the pilot was atherosclerotic and hypertensive cardiovascular disease in association with obesity, and the manner of death was natural. The medical examiner reported that the pilot had cardiomegaly (700 grams), left ventricular hypertrophy, severe coronary artery atherosclerosis (60 to 80%), and atherosclerosis of the aorta. The pilot's body mass index (BMI) was 33.8 kilograms per meter squared. The medical examiner also reported evidence of medical intervention including an endotracheal tube, defibrillation pads, and an intraosseous catheter.

1.3 Toxicology

Toxicology testing performed by the medical examiner's office was positive for the high blood pressure medication amlodipine in the pilot's femoral blood; this substance is generally considered non-impairing.² Toxicology testing performed by the FAA Forensic Sciences laboratory toxicology detected amlodipine and propafenone in the pilot's heart blood and liver tissue. Propafenone is used to treat life-threatening irregular heartbeats, the medication itself can cause a new irregular heartbeat and increase the risk of death.³ Use of propafenone would require FAA review and approval.

E. SUMMARY OF MEDICAL FACTS

The 71-year-old male pilot was on BasicMed (8/18/20) His third class medical certificate expired in 2018. At his most recent exam on 8/31/16, he reported taking medications for high cholesterol, high blood pressure, and low thyroid function. According to the autopsy, the cause of the pilot's death was atherosclerotic and hypertensive cardiovascular disease in association with obesity and the manner of death was natural. The pilot had cardiomegaly (700 grams), left ventricular hypertrophy, severe coronary artery atherosclerosis (60 to 80%), and atherosclerosis of the aorta. The pilot's BMI was 33.8 kilograms per meter squared. Toxicology testing detected amlodipine and propafenone in the pilots' blood and liver tissue.

Submitted by:
Michelle Watters, MD, PhD, MPH
Medical Officer, RE-1

² FAA. Updated 1/16/19. Forensic Toxicology's WebDrugs. Amlodipine.
<https://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=128>

³ National Institutes of Health (NIH). U.S. National Library of Medicine (NLM). Last revised 2/28/19. [DailyMed - PROPAFENONE HCL- propafenone hydrochloride tablet, film coated \(nih.gov\)](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?id=69881)