



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

December 1, 2016

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Chief Medical Officer

A. ACCIDENT: ERA15FA330; Alabaster, AL

On August 27, 2015, about 1906 central daylight time, a Cirrus SR22, N1116C, was destroyed when it impacted trees and terrain while on the final leg of the traffic pattern at Shelby County Airport (EET), Alabaster, Alabama. The airplane was owned by Hard Times LLC and operated by a private individual. The private pilot was fatally injured. Visual meteorological conditions prevailed and no flight plan had been filed for the personal flight. The flight was conducted under the provisions of Title 14 Code of Federal Regulations Part 91. The flight originated from Birmingham-Shuttlesworth International Airport (BHM), Birmingham, Alabama, about 1830.

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 any medical conditions, the use of any medications/illicit drugs, and the presence of any toxins.

2. Methods

The FAA medical case review, toxicology results, autopsy report, records from the investigator's interview with the pilot's wife, and the investigator's reports were reviewed.

FAA Medical Case Review

According to the FAA files, 38 year old male pilot reported 1,400 total flight as of his last medical exam, dated 05/01/2015. At that time, he was 67 inches tall and weighed 172 pounds. He had previously reported a history of depression (in 1996) but was not using any medication and was

found eligible at that time. He also reported previous facial and hernia surgery. At the time of his last exam, he reported a recurrence of his depression beginning in May 2014 that had been treated with Brintellix. The aviation medical examiner deferred the pilot's medical certificate and additional information was obtained from the pilot. According to information provided from his treating physician, the pilot had initially been treated with sertraline but then switched to vortioxetine in February 2015. Things in his life had been improving and he was weaned off the medication by 7/9/2015. The following week, the FAA issued a third class medical certificate without limitations.

Sertraline is an antidepressant commonly marketed with the name Zoloft. The drug information states, "In controlled studies, sertraline did not cause sedation and did not interfere with psychomotor performance."¹

Vortioxetine is a new antidepressant commonly marketed with the name Brintellix. It is not known to cause significant sedation or other effects that interfere directly with performance.²

Autopsy

According to the autopsy performed by the Alabama Department of Forensic Sciences, Medical Examiner's Office, the cause of death was multiple blunt force injuries and the manner of death was accident. No significant natural disease was identified.

Toxicology

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified citalopram and its metabolite N-desmethylocitalopram as well as trazodone in cavity blood and urine.

Citalopram is a selective serotonin reuptake inhibitor commonly marketed with the name Celexa that carries an FDA warning: "Warnings - may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)".³ However, it has not been shown to degrade performance in psychological testing experiments using healthy volunteers.⁴

¹ National Institutes of Health. US National Library of Medicine. Sertraline. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=f9641190-9151-4f7e-89ff-1e7a818c30ee> Accessed 12/1/2016.

² National Institutes of Health. US National Library of Medicine. Vortioxetine. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=4b0700c9-b417-4c3a-b36f-de461e125bd3> Accessed 12/1/2016.

³ Federal Aviation Administration. CAMI toxicology Drug Information for: Citalopram. <http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=208> Accessed 11/30/2016.

⁴ Paul MA, G.G., Love RJ, Lange M, SSRI effects on psychomotor performance: assessment of citalopram and escitalopram on normal subjects. Aviat Space Environ Med, 2007. 78(7): 693-7.

Trazodone is an older antidepressant medication commonly marketed with the name Oleptro. It carries this warning, “Antidepressants may impair the mental and/or physical ability required for the performance of potentially hazardous tasks, such as operating an automobile or machinery.” In several studies, trazodone was found to cause drowsiness or fatigue in 204 times as many patients as placebo.⁵

Wife’s Information

According to a conversation between the pilot’s wife and the Investigator-In-Charge, the pilot had multiple ongoing stressors and had been dealing with it using the medications described in the review of the FAA medical file, above. The only reason he went off the medications was so that he could get his medical certificate back. She noted he continued to be very stressed and had re-visited his physician about a week before the accident. She did not know if he had started any new medications at that time.

D. SUMMARY OF MEDICAL FINDINGS

The 38 year old male pilot had reported a remote history of depression to the FAA and had a recurrent episode beginning in May 2014. Treatment with medication was initiated and later a second medication was tried. During the spring and early summer of 2015, the pilot was weaned off medication, apparently because he desired to be able to fly and the FAA would not issue a medical certificate while he was using vortioxetine. In July 2015, following a report from the treating physician that the pilot was no longer using any antidepressants, the FAA issued the pilot a medical certificate. Post accident toxicology identified citalopram and trazodone in the pilot’s blood and urine.

⁵ National Institutes of Health. US National Library of Medicine. Trazodone. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=a699724b-7412-479e-9894-4cf6ec454d8b> Accessed 12/1/2016.