

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



Medical Factual Memorandum for Record

October 15, 2024

A. CASE

NTSB ID: CEN23FA095
Location: Hooker, Oklahoma
Date: January 28, 2023

B. MEDICAL SPECIALIST

Specialist JE Tuttle MD MHA FACS
National Transportation Safety Board
Washington, DC

C. DETAILS

1.0 Description of Review

For purposes of evaluating the pilot for potentially impairing medical conditions and substances, the above Medical Specialist reviewed the following sources of medical information, along with selected relevant regulation, medical literature, and investigator reports.

- Federal Aviation Administration (FAA) final medical case review
- Autopsy report- pilot
- Toxicology report - pilot

2.0 Summary of Medical Facts

According to the FAA medical case review, the 46-year-old male pilot's last aviation medical examination was November 9, 2022. At that time, he was 73 inches tall and weighed 279 pounds. He reported no active medical conditions or medication use. He was issued a third-class medical certificate without limitation.

The Oklahoma Office of the Chief Medical Examiner (OCME) performed the pilot's autopsy. According to the pilot's autopsy report, his cause of death was multiple blunt force trauma, and his manner of death was accident. The autopsy did not identify significant natural disease.

The OCME performed toxicological testing of postmortem specimens from the pilot. No tested-for substances were detected.

The FAA Forensic Sciences Laboratory also performed toxicology testing of postmortem specimens from the pilot.¹ Tramadol was detected in cavity blood at 1025 ng/mL and in liver tissue at 6248 ng/g. O-desmethyltramadol was detected in cavity blood at 136 ng/mL and in liver tissue at 787 ng/g. N-desmethyltramadol testing was inconclusive in cavity blood. N-desmethyltramadol was detected in liver tissue at 414 ng/g.

Tramadol is a synthetic opioid used to treat moderate to severe pain. It generally carries a warning that use may impair the mental and physical abilities required to drive a vehicle or operate heavy machinery.² O-desmethyltramadol is an active metabolite of tramadol. N-desmethyltramadol is an inactive metabolite of tramadol.³ According to the FAA, tramadol is a "do not fly" medication.⁴

Submitted by:

JE Tuttle MD MHA FACS
Medical Officer

¹ 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.

² National Institutes of Health National Library of Medicine. Tramadol hydrochloride tablet. DailyMed. <https://dailymed.nlm.nih.gov/dailymed/druginfo.cfm?setid=ae7c54b1-b440-4cca-97e8-e5b825413d32>. Updated March 30, 2007. Accessed April 29, 2024.

³ Levo A, Koski A, Ojanperä I, Vuori E, Sajantila A. Post-mortem SNP analysis of CYP2D6 gene reveals correlation between genotype and opioid drug (tramadol) metabolite ratios in blood. Forensic Science International. 2003;135(1):9-15. doi:[https://doi.org/10.1016/s0379-0738\(03\)00159-2](https://doi.org/10.1016/s0379-0738(03)00159-2)

⁴ Federal Aviation Administration. Do Not Fly Medications. https://www.faa.gov/ame_guide/media/DNI_DNF_tables.pdf. Updated June 28, 2023. Accessed October 9, 2024.