



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

August 24, 2021

Turan Kayagil, MD, FACEP
Medical Officer

A. ACCIDENT INFORMATION

Identification: CEN20LA374

Location: Walker, Minnesota

Date: September 1, 2020 (approximately 20:07 local time)

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 Federal Aviation Administration (FAA) medical case review, the pilot's autopsy and toxicology reports, and the pilot's Minnesota Department of Health death record were reviewed. Investigator reports and relevant regulation and medical literature were also reviewed.

3. Findings

a. FAA Medical Case Review

According to the FAA medical case review, the 62-year-old male pilot had his last aviation medical examination on November 21, 2019. At that time, he reported 8250 total civilian flight hours. He was 68 inches tall and weighed 175 pounds. He reported a history of high blood pressure, qualified under conditions aviation medical examiners can issue (CACI) criteria. The pilot reported using the prescription blood pressure medications metoprolol and hydrochlorothiazide, which are generally not considered impairing. No

significant issues were identified, and the pilot was issued a second-class medical certificate limited by a requirement that he wear corrective lenses for near and distant vision.

b. Autopsy

The Ramsey County Medical Examiner's Office performed the pilot's autopsy. According to the autopsy report, a 3 centimeter (cm) × 3 cm × 3 cm mass was present in the inferior right frontal lobe of the brain, with extension into the temporal/parietal region and possibly involving the right basal ganglia. The mass had a localized area of bleeding, and there was evidence that the mass was causing compression and shift of surrounding brain tissue. According to the autopsy examination of the mass, which included microscopic examination, the mass was likely a glioblastoma multiforme (GBM).

The autopsy also identified two closely approximated acute blood clots in peripheral/distal blood vessels of the lower left lung, without any clots in the main lung arteries. Clot was also present in deep veins of the left lower leg. The autopsy did not identify any other significant natural disease. According to the pilot's Minnesota Department of Health death record, the cause of death was probable fresh water drowning and the manner of death was accident.

c. Toxicology

According to the autopsy report, NMS Labs tested blood from the pilot and did not identify any tested-for substances.¹

The FAA Forensic Sciences Laboratory also performed toxicological testing on specimens from the pilot and detected only the pilot's reported medication metoprolol, in femoral blood and urine.²

D. SUMMARY OF MEDICAL FINDINGS

At his last aviation medical examination on November 21, 2019, the 62-year-old male pilot reported using the prescription medications metoprolol and hydrochlorothiazide to treat high blood pressure. He was issued a second-class medical certificate limited by a requirement that he wear corrective lenses for near and distant vision.

¹ Tested-for substances were listed as: 11-hydroxy delta-9 THC, 6-MAM, 7-aminoclonazepam, acetone, acetyl fentanyl, alpha-hydroxyalprazolam, alprazolam, amobarbital, amphetamine, barbiturates, benzodiazepines, benzoylcegonine, buprenorphine, butabarbital, butalbital, cannabinoids, chlordiazepoxide, clobazam, clonazepam, cocaethylene, cocaine, cocaine metabolites, codeine, delta-9 carboxy THC, delta-9 THC, desalkylflurazepam, diazepam, dihydrocodeine/hydrocodol, EDDP, ephedrine, estazolam, ethanol, fentanyl, flurazepam, hydrocodone, hydromorphone, hydroxyethylflurazepam, hydroxytriazolam, isopropanol, lorazepam, MDA, MDEA, MDMA, methadone, methamphetamine, methanol, midazolam, morphine, norbuprenorphine, nordiazepam, norfentanyl, norpseudoephedrine, opiates, oxazepam, oxycodone, oxymorphone, pentobarbital, phencyclidine, phenobarbital, phentermine, phenylpropanolamine, pseudoephedrine, secobarbital, temazepam, and triazolam.

² The FAA Forensic Sciences Laboratory tests specimens for over 1,300 compounds including toxins, prescription and over-the-counter medications, and illicit drugs; information about these compounds can be found at the Civil Aerospace Medical Institute WebDrugs website (<https://jag.camii.jcabi.gov/toxicology>).

The Ramsey County Medical Examiner's Office performed the pilot's autopsy. The autopsy identified a 3 centimeter (cm) × 3 cm × 3 cm mass in the pilot's right brain. The mass appeared likely to be a glioblastoma multiforme (GBM). It had a localized area of bleeding and was causing compression and shift of surrounding brain tissue. The autopsy also identified two peripheral blood clots in the pilot's left lung and clots in the deep veins of his left lower leg. According to the pilot's death record, his cause of death was probable fresh water drowning.

Toxicological testing performed by NMS labs did not detect any tested-for substances. The FAA Forensic Sciences Laboratory detected metoprolol in femoral blood and urine. Metoprolol is generally not considered impairing.