



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

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Medical Officer

A. ACCIDENT: WPR14LA272, Dietrich, Idaho

On June 29, 2014, about 5:30 p.m. mountain daylight time, an Aerospatiale AS350B2, N350CR, collided with terrain near Dietrich, Idaho. Reeder Flying Service was operating the helicopter under the provisions of 14 *Code of Federal Regulations* Part 135. The commercial pilot and two passengers sustained serious injuries. The helicopter sustained substantial damage during the accident sequence. The cross-country aerial photography flight departed Twin Falls, Idaho, about 4:30 p.m. with a planned destination of Rexburg, Idaho. Visual meteorological conditions prevailed, and no flight plan had been filed.

B. GROUP IDENTIFICATION:

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

Purpose

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

Methods

The pilot's FAA medical certification record, postaccident hospital treatment and hospital laboratory records and the investigator's report were reviewed.

FAA Medical Certification Records

According to the FAA medical certification record, the 57-year-old pilot received his first medical certificate in 1998. His most recent medical exam was dated March 24, 2014. At that time, he was 71 inches tall, weighed 197 pounds, and reported he had accrued 7,094 total flight hours. He reported a history of high blood pressure and elevated cholesterol treated

with lisinopril and atorvastatin. Lisinopril is a prescription medication that reduces blood pressure and is marketed under various names including Prinivil.¹ Atorvastatin is a prescription medication that treats high cholesterol and is marketed as Lipitor.² The FAA aviation medical examiner issued the pilot a second class medical certificate with the limitation: holder shall possess glasses for near / intermediate vision.

Postaccident Hospital Treatment Records

According to records from the pilot's hospital treatment following the accident, while controlling the helicopter the pilot suffered a sudden, temporary loss of consciousness (known as a syncopal episode) which was witnessed by his passengers and documented by their onboard video.³ In addition, the pilot suffered multiple traumatic injuries as a result of the crash.

The pilot reported a history of gastroenteritis during the night prior to the accident that he treated with bismuth subsalicylate (Pepto-Bismol).⁴ The following morning, he reported he felt he was well enough to fly but hospital records revealed persistent enteritis treated with antibiotics.

While hospitalized, the pilot's heart monitor documented a number of episodes of slow heart rates associated with low blood pressure and one additional episode of syncope when his heart paused for five to seven seconds. His cardiologist determined the cause of the pilot's in hospital syncope was sick sinus syndrome, which was successfully treated with dual chamber pacemaker.

Sick sinus syndrome is a group of heart rhythm disorders that include slow heart rhythm (bradycardia) or periods when the heart pauses for an excessive interval sometimes accompanied by fatigue, confusion or syncope. It occurs most often in people older than 50.⁵ The condition is a result of the heart's primary pacemaker losing the ability to generate a heart rate that appropriately maintains the person's blood pressure.⁶

Hospital Toxicology

The hospital laboratory analysis of blood and urine was negative for alcohol and drugs of abuse.^a

D. SUMMARY OF FINDINGS

The pilot had history of high blood pressure and high cholesterol treated with lisinopril and atorvastatin.

The pilot had gastroenteritis the night prior to the accident and symptoms had reportedly resolved following treatment with bismuth subsalicylate but postaccident hospital records revealed persistent enteritis that was treated with antibiotics. The following afternoon, the pilot suffer a sudden loss of consciousness inflight. Postaccident medical evaluation led to a diagnosis of sick sinus syndrome, which was treated with an implanted pacemaker the day following the accident.

^a The pilot's urine was analyzed for cannabinoids, opiates, PCP, cocaine, amphetamine, methamphetamine, benzodiazepines, barbiturate, methadone, oxycodone, and MDMA.

References

- ¹ National Institute of Health, U.S. National Library of Medicine, MedlinePlus, Lisinopril. <https://www.nlm.nih.gov/medlineplus/druginfo/meds/a692051.html> Accessed 03/31/2016
- ² National Institute of Health, U.S. National Library of Medicine, MedlinePlus, Atorvastatin. <https://www.nlm.nih.gov/medlineplus/druginfo/meds/a600045.html> Accessed 03/31/2016
- ³ National Institute of Health, U.S. National Library of Medicine, MedlinePlus, Syncope. <https://www.nlm.nih.gov/medlineplus/fainting.html> Accessed 03/31/2016
- ⁴ National Institute of Health, U.S. National Library of Medicine, MedlinePlus, Bismuth Subsalicylate. <https://www.nlm.nih.gov/medlineplus/druginfo/meds/a607040.html> Accessed 03/31/2016
- ⁵ National Institute of Health, U.S. National Library of Medicine, MedlinePlus, Sick sinus syndrome. <https://www.nlm.nih.gov/medlineplus/ency/article/000161.htm> Accessed 03/31/2016
- ⁶ Chen A, Sick sinus syndrome: Epidemiology, etiology, and natural history In: *UpToDate*, Levy S, Downey B (Eds), UpToDate, Waltham, MA