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Sommario/riassunto	During the investigation of aviation accidents, postmortem specimens from accident victims are submitted to the Federal Aviation Administration's Civil Aerospace Medical Institute (CAMI) for toxicological analysis. As new medications are introduced to the market and are subsequently used by aviation accident victims, CAMI's forensic toxicology laboratory is tasked with developing analytical methods for the determination of these compounds. This report presents a rapid and reliable method for the identification and quantitation of vardenafil (Levitra®) in biological specimens. This procedure utilizes sildenafil-d8, which structurally is closely related to vardenafil, as an internal standard for more accurate and reliable quantitation. The method

incorporates solid phase extraction and LC/MS/MS and MS/MS/MS utilizing an atmospheric pressure chemical ionization ion trap mass spectrometer in the positive chemical ionization mode. Solid-phase extraction proved to be exceptionally efficient providing recoveries that ranged from 94-97%. The limit of detection for vardenafil was determined to be 0.19 ng/mL. The linear dynamic range for this compound was 0.39-200 ng/mL. This method was successfully applied to postmortem fluid and tissue specimens obtained from an aviation accident victim. This novel analytical procedure proved to be simple, accurate, and robust for the identification and quantitation of vardenafil in postmortem specimens.
