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Sommario/riassunto	Hypertension is a growing medical concern in the United States. With an increasing number of Americans suffering from hypertension every

year, the use of antihypertensive medications such as beta-blockers has increased as well. Three beta-blocker medications--atenolol, metoprolol, and propranolol--were among the 200 most prescribed drugs in the United States in 2003, ranked 4, 14, and 165, respectively. Pilots that successfully manage their hypertension either with diet, exercise, and/or medication may remain medically certified to operate an aircraft. However, these pilots are closely monitored to ensure that their hypertension is properly controlled. The FAA classifies approximately 8% of all active civil aviation pilots as "hypertensive with medication." Toxicological evaluation of postmortem samples obtained from pilots is an important part of the investigation of fatal civil aviation accidents. During this evaluation it is not uncommon to detect beta-blocker compounds such as atenolol, metoprolol, or propranolol in the submitted biological samples. In forensic toxicology laboratories, these compounds are most commonly confirmed and/or quantitated by gas chromatography with mass spectrometric detection (GC/MS). Liquid chromatography coupled with mass spectrometric detection (LC/MS), however, is becoming increasingly more prevalent in the field of forensic toxicology and is considered a superior alternative to GC/MS for the analysis of many compounds. There are very few analytical LC/MS methods published for the determination of beta-blockers from biological specimens. Furthermore, we were unable to find any citation for the toxicological determination of beta-blockers in postmortem fluid and tissue specimens using LC/MS; in particular, atmospheric pressure chemical ionization (APCI) in conjunction with ion trap MS. This manuscript describes the validation and application of such a method.