β遮断薬と周術期合併症（POISE）

POISEトライアルの結果、非心臓手術を受ける患者に対する周術期の徐放性メトプロロール製剤の使用は利益と損害の両方をもたらすことが示唆された

POISE trial suggests perioperative use of controlled-release metoprolol produces both benefits and harms for patients undergoing noncardiac surgery

徐放性メトプロロール製剤は、心血管系におけるアテローム性動脈硬化リスクを有し非心臓手術を受ける患者に対し利益と損害の両方をもたらす、とAmerican Heart AssociationのLate-Breaking Clinical Trialセッションで発表された。POISEトライアルでは8,351人の患者を、術前後に経口メトプロロールまたはプラセボを内服し術後30日間継続する群に無作為に割り付けた。データから、周術期のメトプロロールは30日以内の心筋梗塞のリスクは低下させたが、死亡および脳卒中のリスクを上昇させたことが、強く示唆された。データ解析から血圧低下および徐脈が増加することも示された。試験に参加可能な患者の条件は、45歳以上で、24時間以上の入院が予想され、無作為化前3年以内に冠動脈性心疾患、末梢血管疾患、脳卒中、またはうっ血性心不全の既往のある者、または過去に大血管手術を受けたことのある者であった。

Full Text

Controlled-release metoprolol produces both significant benefits and harms for patients at risk for atherosclerotic cardiovascular disease who undergo noncardiac surgery, according to a late-breaking clinical trial presentation at the annual meeting of the American Heart Association.

The Perioperative Ischemic Evaluation (POISE) trial was the largest randomized controlled trial to access whether risks of postoperative cardiovascular events can be lowered by beta blockers.

The study enrolled 8351 patients to determine the impact of metoprolol on the 30-day risk of major cardiovascular events in patients who undergo noncardiac surgery. Researchers used a large pool to detect plausible and relevant relative risk reductions, researchers said.

Patients received an oral dose of 100 mg controlled-release metoprolol or placebo two to four hours before surgery and between zero and six hours after surgery. Twelve hours following the first postoperative dose, patients started taking daily doses of metoprolol or placebo at 200 mg and continued for 30 days after surgery. If at any time patients could not take doses orally, 15 mg of drug or normal saline as placebo was administered intravenously every six hours until patients were ready to switch back to oral doses.

Patients qualified to participate if they were undergoing noncardiac surgery, were 45 years old or older, had an expected hospital stay greater than 24 hours, and had experienced coronary heart disease, peripheral arterial disease, stroke, congestive heart failure within three years of randomization, or major vascular surgery.

"Our study found strong evidence that perioperative controlled-release metoprolol prevents heart attacks but there is also concerning evidence that it increases the risk of death and stroke," said P.J. Devereaux, MD, principal investigator of the trial and assistant professor in the department of clinical epidemiology and biostatistics at McMaster University in Hamilton, Ontario, Canada.

"Findings also demonstrated that with metoprolol there was a decrease in atrial fibrillation and in the need for coronary revascularization an increase in clinically significant hypotension and bradycardia."

Devereaux said clinicians considering perioperative beta-blocker therapy should seek input from patients on their perspective on the trade-off between potential benefits and harms.