Cell-coatedステントは薬剤溶出ステントと同様に有効である（Abstract＃6000）

新たに開発された細胞内皮前駆細胞捕捉ステントは薬剤溶出ステントと同様に再狭窄を予防する

New endothelial progenitor cell-capturing stent is as effective as a drug-coated stent in preventing restenosis

血管内皮細胞をおびき寄せて覆うステントは薬剤溶出ステントと同様にあるいはそれ以上に冠動脈疾患患者の冠動脈開存を維持するとの研究結果が、2008年American Heart Association学会で発表された。新たに開発されたこの血管内皮前駆細胞捕捉（EPC）ステントは血液内を循環する血管内皮前駆細胞に結合する抗体で覆われている。研究者らは世界中の144の施設でこのステントを用いて治療された患者1,640人の1年間の結果を報告した。平均年齢は62.8歳、78.7%が男性であり、25%が糖尿病を有し、36.7%に心筋梗塞の既往があった。過去のスタディに基づき、医師らは73.8%の患者にあらかじめスタチン（血液内の血管内皮前駆細胞数を増加させる）を投与した。その結果、ステント血栓を生じたのはわずか1.0%であった。5.4%が血行再建術を必要とし、9.3%に主要な心有害事象（MACE）－心筋梗塞、予定外のバイパス手術、治療関連カテーテル血行再建術、および心臓死－が発現した。糖尿病患者においては4.7%が血行再建術を施行され、MACE率は10.3%であり、ステント血栓は1.1%に認められた。

Full Text

A stent that entices endothelial cells to coat it works as well or better than drug-eluting stents in keeping arteries open in coronary heart disease patients, according to research presented at the American Heart Association's Scientific Sessions 2008.

The new endothelial progenitor cell-capturing (EPC) stent is coated with an antibody that binds endothelial progenitor cells circulating in the blood. A number of smaller, randomized studies have shown that the stent is effective in carefully selected patients. The new findings came from real-world patients who typically receive stents to restore adequate blood flow to the heart instead of carefully selected trial patients.

"Randomized trials have the advantage of a very good control group, but they usually have very restrictive exclusion and inclusion criteria; so results from randomized trials cannot be extrapolated to everyday patients," said Sigmund Silber, M.D., chief of cardiology at Muller Hospital Munich in Munich, Germany, and the first author of the large, multicenter stenting study.

Silber and colleagues reported the one-year outcomes of 1,640 patients treated with the stent in an international study conducted outside the United States.

"The most significant finding was that the rate of stent blockage was really low," Silber said. "The number of patients who needed another catheterized heart intervention within a year was also low."

Patients were treated at 144 sites around the world and entered into an electronic registry. Their average age was 62.8 years, 78.7 percent were males, 25.0 percent had diabetes, and 36.7 percent had suffered a prior myocardial infarction.

Based on results of previous studies, physicians pretreated 73.8 percent of the patients with statin drugs, which increase the number of endothelial progenitor cells in the blood.

Most patients received two anti-clotting drugs, generally aspirin and clopidogrel, for one month.
Researchers found that one year after stenting:

- Only 1.0 percent of the patients suffered a stent-related blood clot.
- 2.1 percent of the patients died of cardiac causes; 1.8 percent of those were heart attacks.
- 5.4 percent required a revascularization procedure on the treated artery; a catheter-based procedure was used in 5.1 percent to restore blood flow.
- 9.3 percent experienced major adverse cardiac events (MACE), which included heart attacks, unexpected bypass surgery, treatment-related catheter-based revascularization, and cardiac death.
- Among diabetic patients, 4.7 percent had undergone revascularization procedures, the MACE rate was 10.3 percent, and 1.1 percent had stent-related blood clots

"The stent appears very safe, even in diabetics," Silber said. "I don't think EPC-capturing stents will replace drug-eluting stents, but whenever you decide not to use a drug-eluting stent, this stent is a good alternative."

Co-authors with Silber in the international study are: Robbert de Winter, M.D., Ph.D.; Manfred Grisold, M.D.; Jaroslaw Wojcik, M.D.; Harry Suryapranata, M.D.; Expedito Ribeiro, M.D.; and Sim Kui Hian Sarawak, M.D.

OrbusNeich, maker of the EPC-capturing stent, funded the study.

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