施設の心臓手術の可否はPCI後の死亡率に影響しない

急性心筋梗塞に対する血管形成術を心臓手術が可能な病院と不可能な病院のいずれで施行されても1年死亡率は同等である

One-year mortality similar in patients undergoing angioplasty for acute myocardial infarction at hospitals with and without cardiac surgery capability

急性心筋梗塞(MI)に対する一次血管形成術(PCI)を心臓手術が可能な病院と不可能な病院のいずれで施行されても1年死亡率は同等であると2009年American Heart Association学会のレイトブレイキング登録研究のセッションで発表された。一次経皮的冠動脈形成術後の予後:施設内で心臓手術が可能な病院と不可能な病院との比較スタディにおいて、一次PCIを施設内での心臓手術の可能な(SOS)病院で行った方が施設内で心臓手術の不可能な(No SOS)病院と比較し予後が良好であるのか否かを調査した。一次PCIを施行されたSTEMI患者3,018人(うち977人はNo SOS病院で施行)の解析が行われた。No SOS病院では診断のための心臓カテーテル検査を施行しているが心臓手術の設備がないためPCIは日常的には施行されていなかった。結果として、一次PCI後の30日および1年死亡率はいずれの施設で施行されても差がなかった(1年死亡率=SOSで9.41%対No SOSで8.58%)。再血行再建術を必要とする率についても両群間で差はほとんどなかった。しかし、MI再発およびさらに血管形成術を必要とする率は心臓手術の設備のない病院で施行された群で多かった。

Full Text

One-year mortality is similar at hospitals with or without on-site cardiac surgery for patients undergoing primary percutaneous coronary intervention (PCI) to treat an on-going heart attack, researchers reported in a late-breaking clinical registry study presentation at the American Heart Association's Scientific Sessions 2009.

In the Outcomes Following Primary Percutaneous Coronary Intervention: A Comparison Between Hospitals With and Without Cardiac Surgery On-Site study, researchers sought to determine whether patients fared better after having primary PCI at hospitals with cardiac surgery on site (SOS) compared to those having PCI at community hospitals without cardiac surgery on site (No SOS).

They found the rate of death at 30 days and one-year follow-up was no different following primary PCI at either type of facility (one year = 9.41 percent with SOS vs. 8.58 percent without SOS).

"Primary PCI, meaning PCI during the acute phase of a heart attack, is the preferred treatment of an ST-elevation myocardial infarction (STEMI), but it is not widely available," said Marc A. Pfeffer, M.D., Ph.D., the study's principal investigator, the Dzau Professor of Medicine at Harvard and a senior physician in cardiovascular medicine at Brigham and Women's Hospital in Boston, Mass. "Performing PCI at community hospitals without cardiac surgery on site could increase the number of STEMI patients with timely access to this lifesaving procedure."

Primary PCI at hospitals without SOS is not routinely done, though many states have approved its use at hospitals that meet certain American College of Cardiology/American Heart Association guidelines for procedure volume.

To increase the number of STEMI patients with timely access to primary PCI, the Massachusetts Department of Health approved a pilot program in 1997 for primary PCI at hospitals without SOS to determine its safety and effectiveness, said Alice K. Jacobs, M.D., senior author of the study and professor of medicine and director of the Cardiac Catheterization Laboratories and Interventional Cardiology at Boston University Medical Center in Massachusetts.

The researchers analyzed 3,018 STEMI patients who underwent primary PCI, including 977 treated at No SOS hospitals, between January 2005 and September 2007, whose data was collected in the Massachusetts Data Analysis Center registry. The No SOS hospitals had the capability of performing cardiac catheterization for diagnostic purposes, but without a cardiothoracic surgery program they would not routinely have done PCI.

The study had four primary endpoints that researchers analyzed separately: all-cause mortality, recurrent heart attack, repeat need for PCI, and target vessel revascularization at 30 days and one year.

As with mortality, researchers found little difference among patients needing a repeat procedure to reopen the originally blocked cardiac vessel.

"However, patients undergoing primary PCI at hospitals without SOS had a slightly higher incidence of recurrent heart attack at 30 days for reasons that are unclear and will require further study," said Anis, a fellow at Boston University Medical Center during the study who is now in practice in Winchester/Northern Virginia.

At one year, the rate of recurrent heart attack was 6.66 percent at hospitals without SOS vs. 5.06 percent (p=0.11) at those with on-site cardiac surgery.

Although target vessel revascularizations were the same between groups, researchers found more revascularizations of other coronary arteries in the No SOS group, which could indicate more staged procedures in patients in the No SOS group with multi-vessel disease.

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Disclosures: Four of the authors (Anis, Mauri, Patel and Jacobs) perform PCI at hospitals with SOS.