冠動脈造影の穿刺部位に関して腕は鼠径部よりも安全である (Abstract 410-10)

急性冠症候群患者におけるほとんどのカテーテル治療において経橈骨動脈アプローチの方が安全である

Transradial approach safer for most catheter-based procedures in patients with acute coronary syndrome

急性冠症候群（ACS）患者に対し冠動脈造影を施行する際、術者の循環器医が鼠径部からではなく橈骨動脈からのアプローチを行った方が大出血や死亡のリスクが有意に低かったとの研究結果が、第64回American College of Cardiology年次集会において発表され*Lancet*に掲載された。このスタディはACS患者8,400人以上を腕または鼠径部穿刺により冠動脈造影を施行する群にランダムに割り付けた。2つの一次エンドポイントの1つ目である30日間の死亡、心筋梗塞（MI）または脳卒中の合計発症率に有意差はなかった。2つ目の一次エンドポイント（上記イベントと大出血）リスクは、橈骨動脈アプローチの方が有意に低かった。30日間の重大な出血、死亡、MIまたは脳卒中は経橈骨動脈アプローチ患者で9.8%であったのに対し、経大腿動脈アプローチ患者では11.7%であった。これらの差は、経橈骨動脈アプローチ患者の1.6%および経大腿動脈アプローチ患者の2.3%に発現した大出血、さらに経橈骨動脈アプローチ患者の1.6%および経大腿動脈アプローチ患者の2.2%に見られた死亡に大きく依存している。筆者らは、臨床ガイドラインの再評価および多くの心臓カテーテル施術において経橈骨動脈アプローチの推奨を提案している。

Full Text

Patients with acute coronary syndrome undergoing a coronary angiogram had a significantly lower risk of major bleeding and death if their interventional cardiologist accessed the heart using a transradial rather than transfemoral approach, according to research presented at the American College of Cardiology's 64th Annual Scientific Session and simultaneously published online in The *Lancet*. Study authors said the results should prompt a re-evaluation of clinical guidelines and that the arm should be the preferred approach for most catheter-based heart procedures.

The study did not show a significant reduction in one of its two primary endpoints, a composite rate of death, myocardial infarction (MI) or stroke 30 days after a catheterization procedure. However, the second primary endpoint, which included those events plus major bleeding, showed a significant reduced risk in patients randomized to the radial approach, rather than the femoral approach. In addition, patients receiving a catheter via the groin faced a significantly higher risk of death, which was driven by increased bleeding complications in these patients, the study authors said.

"I believe the evidence from our study should compel a switch to the radial approach as the preferred method," said Marco Valgimigli, M.D., Ph.D., associate professor of cardiology and senior interventional cardiologist at the Erasmus University Medical Center in the Netherlands and the study's lead author. "I hope that a new generation of interventional cardiologists will be specifically trained in the radial approach and that more medical centers will build up their expertise in this procedure."

The study is the first large trial to show radial access improves patient outcomes and that it reduces dangerous bleeding beyond the bleeding that can occur near where the catheter is inserted.

"This study shows that interventional cardiologists who are experienced with the radial approach have nothing to lose and everything to gain by using the arm as the access point for these procedures," Valgimigli said. In addition to improving outcomes, the radial approach can also save on medical costs because it typically results in a quicker recovery and shorter hospital stay, Valgimigli said.

The study randomized more than 8,400 angiogram patients at 78 hospitals in four European countries to receive angiogram via the arm or the groin. All study participants had acute coronary syndrome.

Patients receiving radial access suffered major bleeding, death, MI or stroke within 30 days in 9.8 percent of cases as compared to 11.7 percent in those receiving femoral access. The difference was largely attributable to major bleeding, which occurred in 1.6 percent of patients receiving radial access and 2.3 percent of patients receiving femoral access, and death, which occurred in 1.6 percent of patients receiving radial access and 2.2 percent of patients receiving femoral access.

Study authors attributed the fact that the study did not meet its other co-primary endpoint to a higher-than-usual bar for statistical significance, a result of the inclusion of two co-primary endpoints in the study rather than only one. The study found no differences with respect to rates of MI or stroke.

Interventional cardiologists have typically favored catheter access through the groin because it involves a larger artery that is less prone to spasm, an event that can limit the ability to move medical equipment through the catheter. Although the artery in the arm is closer to the surface and thus easier to access, the artery's smaller size makes the radial approach more technically difficult and requires the use of smaller equipment.

Because the radial approach is more difficult to perform, the study showed the hospital's level of experience with this method had a substantial impact on patient outcomes. To build the level of experience necessary to maximize the benefits of the radial approach, a given surgeon should use the radial approach in at least 80 percent of cases, Valgimigli said. However, the femoral approach is still appropriate for certain types of procedures that require the use of larger equipment, such as transcatheter aortic valve implantation (TAVI).

The study, called the Minimizing Adverse Hemorrhagic Events by Transradial Access Site and Systemic Implementation of AngioX Program (MATRIX), also tested the effects of the anticoagulant drug bivalirudin. Those results are being reported separately.

The study was funded by the Gruppo Italiano Studi Emodinamica (Italian Society of Interventional Cardiology), which received research grants from the Medicines Company, the maker of Bivalirudin, and the medical device company Terumo. The study was designed and conducted by Valgimigli and co-investigators.

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