

## Arm artery access safer for angioplasty, review finds

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When compared to using the groin artery, there were fewer bleeding events, death rates.

(HealthDay)—For patients experiencing heart attacks or severe chest pain, it is safer to access blocked vessels through an arm artery rather than a groin artery, a new analysis finds.

After reviewing four international trials involving more than 17,000 patients, the Italian researchers found that 27 percent fewer patients died when their vessel-opening angioplasties were performed via the arm artery.

And more than 40 percent fewer major bleeding events were recorded in this group when compared to the groin artery group, according to the meta-analysis, published Nov. 10 in the *Annals of Internal Medicine*.

"I was not surprised, as several previous trials and pooled analyses had already suggested that radial [arm] access reduces access site-related major bleeding and that this occurrence may ultimately reduce mortality," said study author Dr. Giuseppe Ando, an assistant professor of cardiovascular medicine at the University of Messina.

"These pooled data, given such a clinically relevant mortality benefit, may represent the best incentive for centers to support the transition towards radial [arm] access," he added.

Widely embraced in Europe, Canada and Asia, the arm artery approach has been used for more than two decades to diagnose and treat heart disease, including angioplasty procedures to open blocked blood vessels. About 16 percent of heart catheterization procedures in the United States use the arm artery instead of the groin artery, according to 2012 statistics.

About 500,000 Americans undergo angioplasty each year, while 450,000 have tube-like stents inserted to keep narrowed vessels open, according to the U.S. Centers for Disease Control and Prevention.

Ando and his team compared clinical outcomes with arm access versus groin access in thousands of patients with acute coronary syndrome, an emergency situation that includes heart attacks and unstable angina (chest pain).

In addition to the benefits in reducing death and bleeding risks, the review showed a 14 percent reduced risk of major complications in arm artery patients compared to the groin artery group. But because arm artery procedures use a smaller vessel, they lasted slightly longer than groin artery procedures and came with higher risks for "access-site crossover," meaning the procedure needed to be finished through another access point.

Ando agreed with Dr. Michael Savage, director of the angioplasty center at Thomas Jefferson University Hospital in Philadelphia, that arm artery access is more technically challenging than accessing the heart through the larger groin artery.

"There are a number of reasons why doctors in the United States are slower to adopt it," said Savage, who authored an editorial accompanying the new review. "Even in the meta-analysis, the need to use an alternative access site is about fourfold higher in the [arm] artery group than the [groin artery] group, even in centers that are fairly proficient in [arm] access. So, there are some tradeoffs."

But the arm artery's location close to the skin in the wrist and its ready "compressibility" make it easier to reduce any procedure-related bleeding there than at the groin artery, Savage noted in his editorial.

He urged doctors in the United States to further embrace the use of arm access, and emphasized their need to be proficient using both sites.

"People tend to be fanatical about these things, and to imply that all procedures should be from the arm and not the leg is not correct," Savage said. "Our feeling is that having [physicians] comfortable with both is the best option because that way you can individualize the procedure."

**More information:** The U.S. National Heart, Lung, and Blood Institute offers more on [the heart vessel-opening procedure](#).

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