Radial access for coronary interventions confers lower mortality than femoral access

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Radial artery access for coronary angiography or percutaneous coronary intervention (PCI) is associated with lower risks of all-cause death and bleeding compared with femoral access. That's the finding of late

breaking research presented in a Hot Line session on 29 August at ESC Congress 2022.

Dr. Giuseppe Gargiulo of Federico II University Hospital, Naples, Italy said, "Thirty years after the first radial access interventional coronary procedure on 14 August 1992, our study provides, for the first time, adequate power and solid evidence from high-quality multicenter randomized trials that the use of radial instead of femoral access is associated with reduced all-cause mortality. The benefit accrues early (i.e., within 10 days) after PCI and is maintained up to 30-day follow-up."

European and American guidelines endorse the preferential use of a transradial approach (TRA) over a transfemoral approach (TFA) in patients requiring coronary catheterization. TRA has been associated with a lower incidence of access site-related bleeding and vascular complications compared with TFA. In some studies, but not others, TRA was associated with a mortality benefit; however, none of the analyses were adequately powered for individual endpoints including mortality. Aggregate-data meta-analyses have been conducted but lack granularity to adjust for confounders or identify subgroups that may particularly benefit or be harmed.

This was the first large individual patient-level data meta-analysis of high-quality multicenter randomized clinical trials to investigate the impact of radial versus femoral artery access for coronary angiography or PCI on mortality and major bleeding. Investigators from the Radial Trialists' Collaboration (RTC) obtained individual patient data from trials comparing TRA versus TFA among participants undergoing coronary angiography with or without PCI. The meta-analysis included pooled data from seven trials with a total of 21,600 patients, of which 10,775 were randomized to TRA and 10,825 were randomized to TFA. The median age of participants was 63.9 years, 31.9% were women,

95% presented with acute coronary syndrome, and 75.2% underwent PCI.

The primary outcome was all-cause mortality at 30 days and the co-primary outcome was major bleeding at 30 days. The primary analysis was conducted based on the intention-to-treat cohort. The incidence of all-cause death was 1.6% in the TRA group and 2.1% in the TFA group, for a hazard ratio of 0.77 (95% confidence interval [CI] 0.63–0.95; p=0.012). Major bleeding was also significantly reduced with TRA versus TFA, occurring at rates of 1.5% and 2.7%, respectively, for an odds ratio of 0.55 (95% CI 0.45–0.67; p