Use and Trends in Unprotected Left Main Coronary Artery PCI

Recent data support percutaneous coronary intervention (PCI) as an alternative to surgical revascularization in patients with unprotected left main (ULM) coronary stenosis. To define the current practice of ULM PCI and its outcomes in the United States, Valle and coauthors evaluated 1662 institutions participating in the National Cardiovascular Data Registry CathPCI Registry from 2009 to 2016, during which 33128 patients underwent ULM PCI (representing 1.0% of all procedures, modestly increasing from 0.7% to 1.3% over time). After adjustment, major adverse events occurred more frequently with ULM PCI compared with all other PCI and were also more frequent than reported in clinical trials of ULM PCI.

Genetic Determinants of Thyroid Function and AF

Observational studies show associations of increased free thyroxine (FT₄) and decreased thyrotropin levels with increased risk of atrial fibrillation (AF). Ellervik and coauthors used mendelian randomization (MR) to evaluate the direct involvement of thyroid traits on AF. Study-level MR included 7679 individuals with AF and 49233 referents, and summary-level MR included 55114 individuals with AF and 482295 referents. Genetically increased triiodothyronine:FT₄ ratio, but not FT₄ within the reference range, was associated with increased AF, and increased thyrotropin levels within the reference range were associated with decreased AF. In an Editorial, Roberts emphasizes the relevance of considering AF when deciding to treat subclinical thyroid disease.

Cardiovascular Risk Factors Associated With VTE

It is uncertain to what extent established cardiovascular disease risk factors are associated with venous thromboembolism (VTE). Gregson and coauthors analyzed individual participant data from the Emerging Risk Factors Collaboration (731728 participants) and the UK Biobank (421537 participants). Participants had no evidence of cardiovascular disease at baseline. Older age, smoking, and adiposity were consistently associated with higher VTE risk, while there were inconsistent associations with diabetes and blood pressure. Databases provided limited ability to study lipid and inflammation markers.

Mortality in Men With High Physical Activity Levels and CAC

High levels of physical activity (PA) are often associated with substantial coronary artery calcification (CAC). DeFina and coauthors studied 21758 generally healthy men without prevalent cardiovascular disease participating in the Cooper Center Longitudinal Study to assess associations between high levels of PA, prevalent CAC, and subsequent mortality risk. Men with high PA (at least 3000 metabolic equivalent of task–minutes/week) were more likely to have prevalent CAC of at least 100 Agatston units (AU) compared with those with less PA. In the high PA group with CAC of at least 100 AU, the mean CAC level was 807 AU. However, high levels of PA were not associated with increased cardiovascular disease mortality after a decade of follow-up, even with high CAC levels. In an Invited Commentary, Lavie and coauthors emphasize that these data show that high-intensity exercise can be performed safely even in those with high CAC levels.