Racial Differences and Mortality With NTProBNP Levels

The natriuretic peptide system may be suppressed in black individuals, but whether this contributes to racial disparities in clinical outcomes is unknown. Bajaj and coauthors examined racial differences in N-terminal pro–B-type natriuretic peptide (NTproBNP) levels and their association with mortality in 1198 participants in the Reasons for Geographic and Racial Differences in Stroke study without prevalent cardiovascular or renal dysfunction. With multivariable adjustment, NTproBNP levels were up to 27% lower in black individuals compared with white individuals. For every 1-SD higher log NTproBNP, there was a 31% increased risk of death, driven primarily by higher cardiovascular mortality, and this association did not differ by race. In an Editorial, Wang postulates that relative natriuretic peptide deficiency would predispose black individuals to more hypertension, salt retention, and cardiac remodeling; whether such individuals could be targeted with specific therapies requires further investigation.

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Association of Lipoprotein(a) Variants With Aortic Stenosis

Elevated circulating lipoprotein(a) levels are a risk factor for aortic stenosis (AS), but the effect of multiple risk alleles has not been studied. In a case-control study, Chen and coauthors report results from 44 703 individuals enrolled in the Genetic Epidemiology Research on Aging cohort from 1996 to 2015, of whom 3469 developed incident AS. Two single-nucleotide polymorphisms in the lipoprotein(a) locus, rs10455872 and rs3798220, were associated with AS; individuals with both risk alleles had 2-fold or greater odds of developing AS compared with individuals with no risk alleles. In an Invited Commentary, Garg notes that increased understanding of the molecular pathways by which elevated lipoprotein(a) levels predispose individuals to AS may lead to new preventive therapies.

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Association of HRRP With Mortality in Heart Failure

The Hospital Readmissions Reduction Program (HRRP) has been associated with reduced 30-day readmissions, but there is potential for unintended consequences. Gupta and coauthors examined heart failure readmission and mortality rates from 2006 to 2014 in 115 245 Medicare beneficiaries in 416 US hospital sites in the prospective American Heart Association Get With The Guidelines-Heart Failure registry. The 30-day risk-adjusted readmission rate declined from 20.0% before HRRP implementation to 18.4% in the HRRP penalties phase, while the risk-adjusted mortality rate increased from 7.2% to 8.6% at 30 days and from 31.3% to 36.3% at 1 year. These findings warrant further study of outcomes in heart failure in the HRRP.

Atrial Fibrillation Clinical Phenotypes

The disease subtype classification of atrial fibrillation (AF) does not fully capture its heterogeneity. Inohara and coauthors performed a cluster analysis using 60 baseline clinical characteristics to characterize 9749 patients with AF admitted to 174 sites in the Outcomes Registry for Better Informed Treatment of Atrial Fibrillation (ORBIT-AF) registry. Cluster analysis identified 4 AF phenotypes with distinct associations with clinical outcomes. Compared with a cluster with low-risk factors and comorbidities, adjusted risks of adverse cardiovascular or neurological events and major bleeding were significantly higher in the other 3 clusters, defined by behavioral comorbidity, device implantation, and atherosclerotic comorbidity. The same clusters were identified in an external validation in ORBIT-AF II registry data.