The relation between sex hormone levels, the androgen receptor CAGn-polymorphism and depression and mortality in older men in a community study.

Abstract:
Sex hormones levels and the androgen receptor CAGn polymorphism have been shown to be involved in depressed mood in aging men. But the few prior studies found inconsistent results on the role of both factors. 186 male participants aged >= 65 years from the community based Memory and Morbidity in Augsburg Elderly (MEMO) Study underwent a physical examination, and a medical interview including two scales (Center for Epidemiologic Studies Depression Scale (CES-D); Activities of Daily Living Scale (ADL)). Testosterone, SHBG and LH levels were measured and the androgen receptor CAGn polymorphism was genotyped. \( ?(2) \), Mann-Whitney U-test, Pearson's correlations and multivariable linear and logistic regression were used in the analysis. Higher depressive scores were significantly associated with higher SHBG-levels (beta coefficient 0.25, \( p<0.001 \)). SHBG alone explained 8% of variance of the CES-D depression score. Mortality at 10 years follow-up was predicted by higher SHBG levels, higher ADL-scores, older age, current smoking and the depression score at baseline. This model explained 35% of the variance of mortality. The number of CAG repeats was neither related to depression scores nor to mortality. We found positive associations between SHBG levels and old age male depression as well as mortality.
Whether SHBG has a testosterone independent effect in this context should be investigated further.