

OR02-06: Sexual Symptoms Predict All-Cause Mortality Independently of Sex Steroids in Ageing Men

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Objective: To study the interrelationships between sex steroids, gonadotrophins and sexual symptoms with all-cause mortality in a large prospective cohort of European men.

Methods: 1913 community-dwelling men, aged 40-79, participated in the European Male Ageing Study (EMAS) between 2003-2005. Sexual symptoms were assessed via a validated questionnaire (EMAS-SFQ). Sex steroids were measured by mass spectrometry. In 5 of 8 EMAS centres, survival status was available until 1 April 2018. Cox proportional hazard models were used to study the association between hormones, sexual symptoms and mortality. Because of the wide age range at study entry, age was used as time-scale, instead of years since inclusion adjusting for age. Results were expressed as hazard ratios (HR) with 95% confidence intervals, adjusted for centre, BMI and smoking.

Results: 483 (25.3%) men died during a mean follow-up of 12.4±3.3 years. Men who died had a higher BMI (p=0.002), but smoking status did not differ. TT levels were similar in both groups, but FT was lower in those who died (mean±SD: 312±86 pmol/L vs 270±84, p<0.001) and LH was higher (5.7±3.3 U/L vs 7.8±5.8, p<0.001). Men in the lowest FT quartile had higher mortality risk compared to men in the highest quartile (HR 1.43 (1.06-1.95); p=0.021). Also men in the highest FSH quartile had increased mortality risk (HR 1.38 (1.02-1.88); p=0.036). However, there was no association with TT, E2 or LH. Men with 3 sexual symptoms had a higher mortality risk compared to men with no sexual symptoms (HR 1.77 (1.28-2.41); p<0.001). In particular erectile dysfunction and poor morning erections, but not lower libido, were associated with increased mortality (HR 1.40 (1.15-1.73); p=0.001; HR 1.30 (1.06-1.60); p=0.012; HR 1.14 (0.93-1.40); p=0.203 respectively). Further adjusting for TT and FT did not influence the observed HRs. Also in men with normal TT (>12 nmol/L), the presence of sexual symptoms increased mortality risk (HR 1.51 (1.15-1.97); p=0.003). Finally, men with TT<8 nmol/L and sexual symptoms had a higher mortality risk compared to men with normal TT and no sexual symptoms (HR 1.92 (1.05-3.52); p=0.035).

Conclusions: Men with the lowest FT and highest FSH levels have an increased mortality risk. Sexual symptoms, in particular erectile dysfunction, predict all-cause mortality independently of T levels. As both vascular disease and low T can influence erectile function, sexual symptoms can be an early sign for increased cardiovascular risk and mortality, as well as a sequela of low T.