Press release, European Association of Urology

Study indicates statins lower mortality in prostate cancer patients

Embargo until: Sun 13th Mar 00.01 CET (Munich)

The most comprehensive study so far conducted, from over 30,000 patients in the Danish Cancer Registry, give support to the idea that statin use causes a reduction in mortality after prostate cancer. This work is presented at the 31st Annual EAU Congress in Munich.

Statins are extensively prescribed as a cholesterol-lowering medication, but recent work has shown that they may have beneficial effects on prostate cancer mortality. The situation has been unclear, as it has been impossible to separate the benefits from 'healthy user bias'- where for example the group of statin users may have been more healthy than the normal population with which it is being compared. The unique design of this study goes a long way to address this possible bias, to show that statin use does appear to confer better mortality outcomes.

A group of Danish researchers were able to use the Danish Cancer Registry to look at how mortality rates differed between prostate cancer suffers who took or did not take statins. The comprehensive records in this registry allowed the researchers to link high quality data on cancer diagnoses, prescription use (before and after prostate cancer diagnosis, duration of use etc.), medical history, and socioeconomic parameters, which made it easier to account for possible confounding factors.

They were able to identify all Danish men with prostate cancer in the 1997 to 2012 period. They found that of the 31,790 men diagnosed with prostate cancer, 6675 had used statins within 3 years prior to diagnosis, and 6780 used statins after diagnosis. They found that for statin users, the risk of dying from any cause was reduced to 0.81 (95% CI, 0.76-0.85) that of non-users (in total, 11,811 died of other causes). Statin users also had 0.83 (95% CI, 0.77-0.89) reduced risk of prostate cancer specific mortality compared to non-users (In total, 7,365 died of prostate cancer).

Lead researcher, Dr Signe Benzon Larsen (Danish Cancer Society, Copenhagen), commented: *"Several studies have shown an association between statin use and lower prostate cancer mortality, but the exact relationship has been open to doubt. Due to the unique health care registries in Denmark, we were able to investigate the effect of statins both before and after prostate cancer diagnosis and the effect of type and dose of statin use. This means that we have probably the most extensive data so far indicating that statin use is associated with improved mortality outcome.*

Previous studies have been inconclusive because of the risk of 'healthy user bias', but this phenomenon does not seem to influence our results. We found that statin users have a reduction of around 19% in all-cause death, and 17% reduction of death from prostate cancer. These results indicate that statin use does indeed lead to lower mortality in prostate cancer sufferers".

Commenting, Professor Bertrand Tombal, member of the EAU Scientific Congress Committee, said: *"Whilst awaiting the results of the ongoing trials, this study increases the evidence that statin use may be an easy add-on prescription to lower mortality from prostate cancer. Given their excellent safety profile, their well-establish benefit on metabolic syndrome, and their relatively low-cost, statins are an option that should be discussed with our prostate cancer patients".*

The Danish Cancer Society, “Knæk Cancer”, supports the project financially.

ENDS

Notes for Editors

PLEASE MENTION THE EUROPEAN ASSOCIATION OF UROLOGY CONGRESS IN ANY STORY RESULTING FROM THIS PRESS RELEASE

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The 31st Annual EAU Congress takes place in Munich from 11th to 15th March. This is the largest and most important urology congress in Europe, with up to 13,000 expected to attend: eau16.org.

ABSTRACT no 766

Statin use and prostate cancer mortality

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INTRODUCTION & OBJECTIVES: Active Prostate Cancer (PCa) treatment often leads to late effect such as erectile dysfunction, incontinence and cardiovascular disease. Identification of agents that may prevent or inhibit PCa progression would have significant clinical and public health benefits. An increasing number of observational studies indicate that statin use is associated with reduced mortality of prostate cancer, but the results are not consistent. Potential use of statins for prevention of PCa progression is appealing, as statins are generally well tolerated, inexpensive, and cardioprotective. We examined the influence of statin use on mortality among Danish PCa patients using nationwide high-quality registry data.

MATERIAL & METHODS: All men diagnosed with histological verified PCa in the period 1997-2012 were identified in the Danish Cancer Registry. Exclusion criteria were age <35 years, residency outside Denmark before 1997, and previous cancer history (except non-melanoma skin cancer). Study subjects were followed from one year after diagnosis of prostate cancer until death, migration or end of study (December 31, 2013), whichever occurs first. Data on statin and other drug use, comorbid conditions, socioeconomic status, and PCa treatment were obtained from nationwide prescription, patient and demographic registries. The primary outcomes were all-cause and PCa-specific deaths, and we distinguished between pre- and post-diagnostic use of statins. Post-diagnostic use of statins was included in the primary analyses as a time-varying covariate from date of PCa diagnosis with exposure-lag of one year, and in secondary analyses as use within periods of one or five years following the PCa diagnosis. We computed hazard ratios (HR) and 95% confidence intervals (CI) for all-cause and PCa-specific deaths associated with statin use based on Cox proportional hazards model with follow-up starting one year after diagnosis. The analyses were adjusted for age, calendar-period, stage, Gleason score, treatment, concomitant drug use, comorbidity and socioeconomic position.

RESULTS: Among 31,790 identified PCa patients, we found 7365 PCa deaths and 11,811 deaths of any cause during a mean follow-up time from one year after diagnosis was 3.54 years (standard deviation, 2.86) with a maximum of 14 years. In total, 6675 patients had used statins within 3 years prior to the diagnosis and 6780 used statins following the PCa diagnosis. In the primary (time-varying) analysis, the adjusted HR for all-cause death among ever-users of statins was 0.81 (95% CI, 0.76-0.85) compared to non-users. The corresponding HR for PCa-specific death was 0.83 (95% CI, 0.77-0.89). Similar, albeit more imprecise, inverse associations were found in the baseline and 5-year conditional survival analyses.

CONCLUSIONS: Our results indicate that statin use may reduce the mortality of PCa. Whether statins have a genuine potential in the management of PCa should be explored further.