Impact of common medications on serum total prostate-specific antigen levels and risk group assignment in patients with prostate cancer.

Abstract:

A recent study in men without prostate cancer suggested that extended use of common medications (nonsteroidal anti-inflammatory drugs (NSAIDs), thiazide diuretics and statins) may lower serum total prostate-specific antigen (PSA) levels by clinically relevant amounts. The present study evaluated the impact of these drugs in patients with clinically localized prostate cancer. A retrospective analysis of 177 patients was performed. The multivariate regression analyses were adjusted for age, prostate volume, Gleason score, T stage, diagnostic setting (clinical symptoms versus elevated PSA only) and presence of diabetes mellitus. Drug use increased with age, e.g. to 50% in patients $\geq 70$ years. The most commonly used drugs were statins (32% of all patients, including those who used drug combinations), followed by NSAIDs (21%) and thiazide diuretics (13%). Drug use was associated with a statistically significant PSA reduction (12%, when comparing 104 non-users to 73 users of any of the three drug types; adjusted analysis, $p=0.01$). Compared to the U.S.A. National Comprehensive Cancer Network risk group assignment based on measured PSA level, reassignment after correcting for medication use resulted in 8 changes among 57 patients with low or intermediate risk (14%). No such changes can be expected in patients belonging to the high-risk group. These results support the concerns expressed previously, given that risk
group assignment, which may be inaccurate in patients using concomitant medications, eventually
guides choice of treatment.