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Heber provac, a therapeutic GnRH based vaccine to treat advanced prostate cancer

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GnRH-based vaccines represent a promising anti-hormonal treatment alternative in prostate cancer, because they can reduce serum testosterone to cast rating levels, avoid the "hot flushes" produced by GnRH analogues and can be administered in acute and complicated forms of prostate cancer. The present study assesses the application of Heber provac, a GnRH based vaccine candidate for patients suffering from advanced prostate cancer. The main objective of the clinical trial was to evaluate the safety and efficacy of this vaccine candidate in 4 levels of dosage. To this aim, 56 patients affected by advanced prostate cancer diagnosed by biopsy were included. As result, after the first immunizations, the patients exhibited anti GnRH antibodies and in turn, testosterone levels reduction. In concordance with the hormonal and immunological response, the patients exhibit a decrease of both; the number of obstructive symptoms as well as the severity of them. There was also a normalization of the prostatic specific antigen (PSA) in the 80% of the patients after they finished the last immunization and the clinical evaluation demonstrated the significant reduction of the primary tumor from grades III/IV to I/II in all the patients that respond biochemically. Regarding the safety, majority of adverse effects of the vaccine were those expected according to the mechanism of action of the vaccine through the reduction of testosterone levels. No severe adverse events were found in any of the patients. Only the 4.4% of the adverse effects were grade III. We conclude that the vaccine proved to be safe and effective in the 4 dose levels. In order to a new clinical trial in a major number of patients is currently planned.

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Type 2 diabetes mellitus and prostate cancer risk: A population based case control study in Montreal, Canada

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Objectives: To investigate the relationship between type 2 diabetes mellitus (T2DM) and prostate cancer (PCa) risk in a large population-based case–control study conducted in Montreal, Canada.

Subjects & Methods: Cases were 1937 men with histologically-confirmed incident prostate cancer, aged ≤75 years, diagnosed across French hospitals in the Montreal area between 2005 and 2009. Concurrently, 1995 population controls from the same residential area and age distribution were randomly selected from electoral list of French-speaking men. Detailed lifestyle and medical histories were collected during in person interviews. Prevalence of T2DM was estimated at two years before index date (diagnosis for cases/interview for controls). Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (CI) for the association between T2DM and PCa risk.

Results: T2DM was associated with a reduced risk of PCa (OR=0.60, 95% CI: 0.49-0.74) after adjusting for age, family history of PCa, ancestry, recent PCa screening and education. The association was similar for low-grade cases (Gleason scores less than 7 or [3+4]: OR=0.58, 95% CI: 0.47-0.72) and high-grade cases (Gleason scores greater than 7 or [4+3]: OR=0.67, 95% CI: 0.50-0.90, p wald test=0.40). The ORs appeared to be lower when T2DM was diagnosed more than four years before index date or when treated with metformin. The risk decrease remained significant among subjects with a history of metabolic syndrome.

Conclusion: The negative association observed between T2DM and PCa concords with previous findings. The involvement of insulin and IGF-1 pathways in prostate cancer development has been suggested to explain this inverse relation.

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