

Obesity-Related Biomarkers Obscure PSA Findings

BY FRAN LOWRY

Orlando Bureau

ATLANTA — Elevated C-peptide and hemoglobin A_{1c} levels were associated with low levels of prostate-specific antigen in obese, nondiabetic black and white men in a cross-sectional study.

PSA levels were approximately 50% lower among black men with higher levels of C-peptide, a biomarker of insulin, whereas among white men, PSA levels were lower with increasing levels of HbA_{1c}, a marker of blood glucose control, said Jay H. Fowke, Ph.D., at a conference sponsored by the American Association for Cancer Research.

Such metabolic disturbances may mask the presence of prostate cancer and delay a diagnosis until the cancer is too advanced for successful treatment, said Dr. Fowke of Vanderbilt University, Nashville, Tenn.

A number of studies have looked at obesity and PSA levels, and some findings have suggested that obese men have lower PSA levels. Black men are more likely than white men to be diagnosed with advanced prostate cancer and have a poorer prognosis following treatment.

Dr. Fowke and his Vanderbilt colleagues looked at the biomarkers associated with obesity to see if there was a link between them and lower PSA levels.

They selected at random 121 black men and a similar number of white men who were participants in the Southern Community Cohort Study, a National Cancer Institute-funded initiative that monitors the health of 90,000 men and women between the ages of 40 and 79 years throughout the southern United States.

The proportion of obese and overweight men was the same in each group, and none of the men had a prior diagnosis of prostate cancer or diabetes.

Blood samples from each participant were analyzed for C-peptide and HbA_{1c}, as well as leptin and adiponectin.

There were "subtle" differences between black and white men, Dr. Fowke said.

PSA levels did not significantly differ across leptin or adiponectin levels, but were 50% lower among black men with higher C-peptide levels. This association was especially prevalent among obese black men, he noted.

In contrast, C-peptide was not associated with PSA level among white men. In this group, PSA levels were 50% lower in men with higher levels of HbA_{1c}.

The association between HbA_{1c} and PSA seemed to be stronger among white men with a body mass index of less than 30 kg/m². "We did not find any trend or pattern between HbA_{1c} and PSA among African American men," he said.

The finding suggests that there may be differences between white and black men in the way PSA responds to obesity.

In an interview, Dr. Fowke said these are basic research findings that do not indicate a need to change current screening recommendations. However, the findings do suggest that clinicians who manage obese and overweight patients should be aware that PSA level may not be as sensitive for the detection of prostate cancer in these patients.

Physicians might want to do PSA velocity testing to see if there is a large change in PSA values over time.

DR. FOWKE

"They may want to put more emphasis on a digital rectal exam, for example. Or they might want to follow these patients more carefully and do PSA velocity testing to see if there is a large change in PSA values over time."

Dr. Fowke said he had no conflicts of interest to declare. The study was sponsored by the National Cancer Institute. ■



Brachytherapy Is of Benefit in Young Prostate Cancer Patients

BY JANE SALODOF MACNEIL

Senior Editor

LOS ANGELES — Contrary to conventional wisdom among many urologists, brachytherapy is a good option for younger prostate cancer patients, according to investigators who reviewed outcomes for 1,763 men treated with radiation seed implants.

Five years after treatment, men 60 years of age and younger had "excellent" biochemical control rates that were comparable with those of older men, Dr. Alice Ho reported at the annual meeting of the American Society for Therapeutic Radiation and Oncology.

At a median follow-up of 59 months, 96% of younger men maintained biochemical freedom from failure (BFFF), she said. In comparison, men aged 61-75 had a control rate of 92% at 62 months of follow-up. For those 76 years of age and older, the rate was 88% at 54 months.

These differences were statistically significant on univariate analysis, but the outcomes became comparable when the investigators adjusted for such factors as risk, Gleason score, pretreatment prostate-specific antigen levels, additional radiation, stage, treatment era, use of hormonal therapy, and radiation dose.

"Age should not be a deterrent when considering radiation seed implantation for prostate cancer," said Dr. Ho, a radiation oncologist at Memorial Sloan-Kettering Cancer Center in New York.

Dr. Ho did the research while a resident at Mount Sinai Medical Center, also in New York. She and her coauthors identified 2,850 patients who had been treated with radiation seed implantation from 1990 to 2005 at Mount Sinai

Hospital. They included in the study only those who had clinically localized prostate cancer, had received low-dose brachytherapy with or without external beam radiation or hormone therapy, and had been followed for at least 2 years.

Nearly two-thirds of the patients studied, 1,142 men, were between the ages of 61 and 75 years. Another 400 men aged 60 and younger accounted for 23% of the sample. The remaining 221 men, 12%, were 76 years of age or older. Overall, the population had been followed for a median of 5 years.

The younger men were more likely to have low-risk disease (57% vs. 40% of the older groups) and to be treated after 1997 (72% vs. 60%)—two observations that were probably related, according to Dr. Ho. In addition, the younger men were more likely to receive a full biologically effective dose of radiation: 92% vs. 88% of the older groups.

"In earlier years, we were not even seeing younger men in our clinic," she said at a press briefing. Later on, with improved [prostate-specific antigen] screening, urologists began diagnosing more prostate cancers in younger men. Radiation techniques also improved, she said, so that "it is very possible to deliver high radiation doses safely and effectively."

"Radiation oncologists in prostate cancer ... tend to get the patients who have the worse prognosis because the common belief always has been that surgery is better," she said.

"When offering radiation to a younger population of patients, the risk of second malignancy is something that needs to be considered very carefully," she said. ■

Direct Talk, Practical Advice Help Put Prostate Cancer in Perspective

BY MIRIAM E. TUCKER

Senior Writer

WASHINGTON — "You're not going to die of prostate cancer." That's the first thing Dr. Tanya B. Dorff, a specialist in genitourinary oncology, tells most of the patients with localized prostate cancer who are referred to her.

That simple sentence "opens the mind to receive all the other information and process it to make an informed analytical decision ... I tell them we're not talking about death, but their chances of surviving free of PSA," she said at the annual Community Oncology Conference.

Another clinical pearl: Many patients have had a biopsy done at a community hospital that lacks specialists in prostate pathology. Whenever there is a question or inconsistency, Dr. Dorff sends the specimen for a second opinion pathology review to a center such as Johns Hopkins or Bostwick Laboratories that has expertise in this area, "because so much of what we're telling our patients is based on the Gleason score," said Dr. Dorff of the Angeles Clinic and Research Institute, Santa Monica, Calif.

Patients at low or intermediate risk for disease progression will often wonder why they're not receiving all the imaging tests that other family members with cancer underwent for disease staging. Simple reassurance will usually suffice here, although there are a couple of situations in which Dr. Dorff does consider imaging in patients who are not at high risk for progression.

Also, for an intermediate or high-risk patient who is undecided about whether to choose surgery or radiation, an MRI can identify whether there is extracapsular extension or seminal vesicle involvement.

Such a finding would point to the need for adjuvant radiation along with surgery, in which case he might choose primary radiation with hormone therapy instead.

Indeed, dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) and magnetic resonance spectroscopy (MRS) are emerging technologies that hold promise for improving prognostic and treatment capabilities in the future.

When it comes to quality of life considerations, simplify the side effects discussion by telling the patient it really comes down to a tradeoff between bowel toxicity—slightly more prevalent with radiation—and urinary toxicity, somewhat more likely with surgery. Impotence isn't part of the equation because that risk isn't decisively different between modalities. "I tell patients that most of them will not end up with these consequences, and their risk is minimized by going to a high-volume urologist and radiation oncologist."

Low-risk patients can also be given the luxury of time. Data from at least one study suggest that delaying treatment for up to 12 months did not compromise curability, compared with immediate surgery (J. Natl. Cancer Inst. 2006;98:355-7). However, there's a bit more pressure for high-risk patients, who should be encouraged to decide within a few weeks.

One should also discuss plans for surveillance after treatment, the need for bone mineral density and cardiac evaluation for patients on androgen deprivation therapy, screening recommendations for family members, and a review of the patient's lifestyle and dietary habits.

FAMILY PRACTICE NEWS and Community Oncology are published by Elsevier. ■