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LETTER TO THE EDITOR

Comments on the article "Biomarkers for prostate cancer" by Eric Schiffer

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Dear Editor,

With widespread PSA screening, the number of equivocal cases of prostate cancer has dramatically increased. This has led to a concomitant increase in the number of prostate biopsies, many of which might be deemed unnecessary. Prostate biopsy is an invasive procedure, fraught with potential complications. A non-invasive alternative would certainly be preferable.

Dr. Eric Schiffer has reviewed the many prostate cancer biomarkers and their impact on the clinical management of this disease [1]. These biomarkers utilize blood, tissue, urine, and seminal fluid assays. He posits that both urine and seminal fluid may detect early prostate malignancy through exfoliated cancer cells and secreted prostate products. Urine may also be a potential source of prostate-specific markers. However, since a significant volume of seminal fluid is produced by the prostate and seminal vesicles, seminal fluid might be an even better choice for this purpose. Cytological examination of the seminal fluid may be able to provide a more direct method of revealing an underlying prostate and/or seminal vesicle malignancy and serve as an alternative to prostate biopsy.

Differentiating prostate from other epithelial cells could present a problem for the cytologist. However, some investigators have reported having done so using special staining techniques [2, 3]. The use of semen cytology could not only evolve into a feasible method for identifying the tumor cells but also be able to ascertain the grade of the underlying tumor.

In order to establish the validity of using semen cytology as a method for diagnosing prostate carcinoma, one must first find answers to the following questions:

1. If the cancer cells found in a semen specimen are comparable to the cells from multiple biopsy specimens? (Taking into account that some of the prostate tissue may no longer be connected to the ductal system and might, therefore, not shed cells into the ejaculate.)
2. What % of patients with low-grade prostate cancer has cancer cells in their semen?
3. What % of patients with a high-grade tumor and/or seminal vesicle invasion has cancer cells in their semen?
4. If the levels of PSA, PCA3 (and possibly other tumor markers as well) correlate positively with the biopsy and cytology results?
5. What are the findings in a control group?

There is a real need for a less invasive diagnostic procedure than prostate biopsy. Furthermore, if prostate malignancy is found, it is important to differentiate between the men with aggressive tumors from those with slow growing tumors which may present no clinical problems.

I am hoping that these comments will stimulate a more thorough study to ascertain if semen cytology can be used as an alternative for prostate biopsy.

Conflict of interest statement There is no conflict of interest.

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