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“FALSE POSITIVE” PSA TESTING IN ANAL SWABS TAKEN FROM PUTRIFIED MALE BODIES

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Over the past years the use of prostate specific antigen (PSA) detection as evidence for the presence of sperm in forensic cases has been well established. An 84% agreement between the results of the PSA method and direct microscopic examination (of vaginal swabs) has been reported (Levine, 2004).

We report 5 homicide cases of male homosexuals where anal swabs tested positive for prostate specific antigen using the chromatographic immunoassay Quick Pac II OneStep PSA test (Sintron Bioresearch Inc, Ca) but where direct microscopic examination could not detect spermatozoa and DNA testing failed to demonstrate the presence of foreign DNA. All bodies were in a state of decomposition ranging from mild to moderate (post-mortem intervals ranged from 96 hours to 6 weeks).

In one case, azoospermia one month prior to death could be established based on available medical documents. Since the prevalence of azoospermia in the general male population is estimated to be only 1-4%, alternative explanations have to be found for explain the other false positive cases.

We make the hypothesis that postmortem diffusion of PSA from prostate ductal lining cells into the anal cavity, facilitated by the tissue decomposition might explain positive PSA testing of anal swabs in the absence of sperm.