ABAcard p30 Test for the Identification of Semen in Sexual Assault Victims

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ABSTRACT

Objectives: Our objective was to compare the frequency of positive tests for semen after sexual assault, before and after the implementation of the ABAcard as part of our SANE (Sexual Assault Nurse Examiner) Program. Unlike the acid phosphatase test, which relies on enzymatic activity, the ABAcard p30 Test (Abacus Diagnostics, Inc.) is an antibody immunoassay test that detects p30, a glycoprotein produced by the prostate which is present in human semen, even if the assailant is sterile or has undergone vasectomy, and is present in seminal fluid at dilutions of up to one part per million. Methods: This was an observational, prospective, consecutive study conducted in an urban, inner-city emergency department which serves as the referral center for all local sexual assault victims. From March 1998 to March 2000, emergency medicine residents collected specimens and the acid phosphatase presumptive test was used in the detection of semen. From April 2000 to April 2002, SANE practitioners obtained the forensic data and the ABAcard was used to detect semen. Tests were performed and data was obtained from the New Orleans Coroner's Forensic Laboratory. Results: During the two years prior to the implementation of the ABAcard p30 test, 724 patients were evaluated for sexual assault. Using the acid phosphatase presumptive test, 127 patients (17.5%, central confidence interval ±2.8%) had a positive test for semen. In the two years after the inception of ABAcard, 359 patients were evaluated, and 160 patients (44.6%, central confidence interval of ±5.1%) had a positive test for semen. The 27.1% absolute difference between these two groups was statistically significant on chi square analysis (p < .001). Conclusions: The implementation of the ABAcard p30 Test for the forensic identification of semen performed by SANE practitioners, resulted in a statistically significant improvement in detecting semen from sexual assault victims.