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JOURNAL ARTICLE

Computer-assisted semen analysis (CASA) of epididymal sperm from the domestic cat

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Motion characteristics of epididymal sperm from domestic cats exhibiting a high (> 60%; normozoospermic; n = 21) or low (< 40%; teratozoospermic; n = 6) occurrence of structurally normal spermatozoa were correlated with morphology (MOR) using computer-assisted semen analysis (CASA). Mean values and standard errors for percent motility (MOT), curvilinear velocity (VCL), linearity (LIN), straight line velocity (VSL), and amplitude of lateral head displacement (ALH) were recorded for 3 hours. Average values for percent normal spermatozoa, MOT, VCL, VSL, and ALH were higher (P < 0.01) in samples from normozoospermic cats than from teratozoospermic cats at 0 hours, and there was no difference in motion parameters over the 3-hour incubation period in either group. Strong correlations (P < 0.01) existed between MOR and VCL, VSL, ALH, or MOT, but not LIN, upon regression analysis. We conclude that (1) motion parameters of domestic cat sperm are significantly correlated with morphology and (2) abnormal motion parameters associated with low fertility potential in other species are prevalent in samples from teratozoospermic cats. The correlation between morphology and altered sperm movement found in this study suggests that motion analysis of spermatozoa by CASA may be useful in evaluating fertilization potential in felids.

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