
The usefulness of various laboratory tests to evaluate the functional properties of spermatozoa from subfertile men is controversial. We assessed the relationship of sperm: volume, sperm concentration, motile sperm count (MSC), undifferentiated round cells (RC) count, motility, velocity, linearity and amplitude of lateral head displacement, length of abstinence, and white blood cell count with the results of the Endtz test, the hypoosmotic swelling test, the bovine cervical mucus penetration test, and sperm morphology scored by Kruger and by World Health Organization (WHO) criteria. The results of semen analyses from 100 patients undergoing infertility evaluations were analyzed using the Pearson correlation test to examine the relationship between each test and each semen parameter. Our results showed good correlation between the Endtz test and RC (P<.001), the HOS test with MSC (P=.018) and motility (P<.001), the BCMP test with sperm concentration (P<.001), motility (P<.001), and MSC (P<.001); Kruger criteria with MSC (P=.039) and motility (P=.001); and WHO criteria with motility (P=.001). We then categorized each test result or each parameter as normal or abnormal and analyzed them as categorical variables using Fisher's exact test. Concordant categorizations were seen between abstinence and semen volume (P<.001), MSC (P=.001) and motility (P=.002), HOS and sperm motility (P=.001), and BCMP with concentration (P=.03).

In conclusion, semen analysis results can be complemented by tests of sperm function in the initial investigation of primary male infertility. These tests are easy to perform, are accessible to clinicians and can be done simultaneously with routine semen analysis.