

Journal of Andrology, Vol 16, Issue 3 272-277, Copyright © 1995 by The American Society of Andrology

JOURNAL ARTICLE

Acrosin activity of human spermatozoa by means of a simple gelatinolytic technique: a method useful for IVF

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Acrosin activity was determined using a gelatinolysis technique in 100-microliter semen aliquots of 114 patients (normozoospermia, n = 90; asthenozoospermia, n = 12; oligozoospermia, n = 10; polyzoospermia, n = 2) attending an in vitro fertilization (IVF)

program. Halo diameter, halo formation rate, and a calculated acrosin activity index correlated significantly with the IVF rates ($P = 0.0054$, $r = 0.396$; $P = 0.0009$, $r = 0.401$; and $P = 0.0003$, $r = 0.428$, respectively). In cases where the halo diameter was < 10 microns and halo formation rate was $< 60\%$, all patients were subfertile or infertile, that is, they showed poor or no fertilization in vitro, respectively. The assay demonstrated a relatively low sensitivity: 25.7% for halo diameter, 37.1% for halo formation rate, and 25.7% for acrosin activity index, respectively. This might be attributed to other sperm functional aspects, such as disturbed acrosome reaction or impaired zona binding.

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