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The Use of Novel Semen Quality Scores to Predict Pregnancy in Couples With Male-Factor Infertility Undergoing Intrauterine Insemination

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The purpose of this study was to determine whether 2 new semen quality (SQ) scores could predict pregnancy in patients undergoing intrauterine insemination (IUI) for male-factor infertility and whether an overall score could help in counseling these couples with assisted reproductive technique (ART) options. Ninety-three couples with male-factor infertility were examined for semen analysis. Samples were prepared by density gradient separation (47% and 90%), and IUI was performed. On the basis of the 2 semen scores (SQ and relative quality [RQ]), the IUI-semen pregnancy score (IUI-SPS) was calculated. Of the 192 IUI cycles, 14% (27 of 192) resulted in pregnancy. Both prewash SQ and RQ scores were significantly related to pregnancy ($P = .02$ and $P < .001$), as was the postwash RQ score ($P < .001$). Of the IUI cycles in which the postwash RQ score was greater than 125, 40% (13 of 32) resulted in pregnancy compared to 9% of cycles (14 of 160) in which the postwash SQ score was less than 125. The prewash IUI-SPS score was significantly related to IUI-induced pregnancy ($P < .001$). Both the pre- and postwash SQ and RQ scores can predict pregnancy in male infertility patients undergoing IUI. Patients with an IUI-SPS less than 150 may be advised to seek in vitro fertilization (IVF), whereas those with an IUI-SPS greater than 150 may be advised to seek IUI.

Key words: Overall semen quality, relative quality, semen pregnancy score, outcome prediction

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