

P-3

Taipei, Taiwan 2018.4.13-4.15

Title: Do Sperm Quality Analyzer parameters help to evaluate personal fecundity?

Author: Kazuhisa Tomita, Kenta Izaki, Kanako Osumi, Yuki Miyamoto, Takaaki Sekito, Yuki Hayashi, Yuko Sakurai, Yoshie Nagatakidani, Akiko Koike, Remi Kawabe, Yoshiko Asai, Takao Himeno, Tomoko Inoue and Yoshiharu Morimoto.

Affiliation: HORAC GRAND FRONT OSAKA CLINIC, 15th floor, Grand Front Osaka Tower B 3-1, ofuka-cho, kita-ku, Osaka, Japan

(Background and aims)

Manual semen counting (MASC) is generally performed in ART laboratory. But, only MASC is less informative for fertility prediction.

Sperm quality analyzer (SQA) (MES, USA) can evaluate sperm motility with velocity. Sperm motility index (SMI) on SQA parameters have been used for fertility prediction in Japan. However, availability of other parameters haven't been elucidated. In this study, the relation between parameters on SQA and fertility were investigated.

(Methods)

51 semen samples from infertile couples were analyzed by means of MASC and SQA during April to July in 2017. MASC was performed by Makler[®] counting chamber. Total sperm concentration (TSC) (10^6 cell/mL), rates of sperm with motility (RSM) or normal morphology (RNM) were analyzed. On SQA evaluation, TSC, RNM, functional sperm concentration (FSC) (10^6 cell/mL), progress motile sperm concentration (PMSC) (10^6 cell/mL) (a): more or (b): less than 20 μ m/sec, motile sperm concentration (MSC) (10^6 cell/mL), velocity (min/sec), and SMI were analyzed. To investigate accuracy of values of SQA parameter, correlation between values on SQA and MASC were analyzed by single regression analysis. Relationship between fertility and SQA parameters were analyzed by multiple logistic regression analysis. We assessed as fertile when the couple had a natural conception history at the first visit.

(Results)

There were significant correlation between MASC and SQA in TSC and RSM (R 0.84, R 0.52, respectively, $P < 0.001$). Regarding relation between fertility and SQA parameters, all factors on SQA didn't involve to fertility (FSC: odds rate (OR) 3.2, 95% confidential interval (CI) 0.3-34.4, PMSC (a): OR 1.3, CI 0.16-10.6, PMSC (b): OR 0.94, CI 0.08-11.0, MSC: OR 0.62, CI 0.14-2.7, velocity: OR 3.6, CI 0.3-39.8, SMI: OR 0.89, CI 0.78-1.0).

(Conclusion)

Significant relation wasn't found between SQA parameters and fertility in infertile couples. Further study on fertile couples is necessary for evaluation of SQA's effectiveness.