Effect of human sperm MTT viability assay on outcome of intraycytoplasmic sperm injection

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Abstract

Sperm MTT Viability Assay has been shown to be a suitable test for differentiation of viable from non-viable sperms. In this procedure MTT is converted to observable purple MTT Formazan by mitochondrial dehydrogenase in the midpiece region and therefore viable sperms can be distinguished which makes this test suitable for ICSI. Therefore, in order to study the effect of MTT positive sperms on fertilization, cleavage and blastocyst formation, 109 fresh human oocytes (metaphase II) were divided in to two groups; one group was injected with MTT positive sperms and the other one was taken as control. The results of study showed that there is not significant difference with respect to fertilization, cleavege and blastocyst formation between these two groups. Therefore, if MTT proves to be nether mitogenic nor teratogenic, sperm MTT viability assay might be useful for ICSI in patients with absolute or severe asthenospermia, especially in cases with tail abnormality.

Keywords: Human sperm, MTT, ICSI, and Viability assay.

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