

CHROMATIN DISPERSION TEST FOR SPERM DNA FRAGMENTATION DETERMINATION ASSOCIATION WITH LIVE BIRTH OUTCOMES. A RETROSPECTIVE STUDY ON ICSI CYCLES

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Abstract Body

Background: Sperm DNA fragmentation has gained acceptance in the assessment of male fertility. DNA dispersion tests are a popular choice for fertility clinics because of its low cost and low requirement of equipment to perform. It is based on the presence or absence of a chromatin halo typical of non-fragmented DNA strands after acid denaturalization and nuclear protein extraction. Objective : To determine the association between DNA fragmentation and ICSI live birth outcomes . Materials and method: Retrospective clinical file revision of couples who underwent Sperm DNA fragmentation testing before ICSI at Instituto Mexicano de Infertilidad between January 2016 and December 2018. Results: 69 case files analyzed. 57 male partners (80%) had normal sperm DNA fragmentation. 12 male partners (20%) had high levels (> 30 %) of sperm DNA fragmentation. There was no statistical association between High Sperm fragmentation and ICSI Live birth outcomes. Cumulative clinical pregnancy rates were 47.37 % (27/57) and 41.67 % (5/12) following ICSI with normal DNA fragmentation levels and elevated DNA fragmentation respectively (OR = 1.2558; CI = 0.3473 - 4.8005 ; p =0.3680). Cumulative livebirth rates were 42.11% (24/57) and 33.33% (4/20) respectively (OR = 1.4969; CI = 0.3899 - 6.0790 ; p= 0.3001). High Sperm DNA fragmentation had independent statistical association (p < 0.05) with oligozoospermia , asthenozoospermia and teratozoospermia . Conclusion: Our findings show no statistical association between clinical pregnancy and live birth rates after ICSI when the male partner's sperm DNA fragmentation was over a threshold of 30 %.