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Association between advanced paternal age, seminal quality and the dna fragmentation index

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INTRODUCTION. Currently there is no age limit in the male in relation to their production of sperm, however, we have seen the increase in acquired pathologies, the decrease in the seminal quality, the fragmentation index and a strong association with the incidence of chromosomal abnormalities (15) The studies also show an important association with a decrease in the pregnancy rate and an increase in the time of pregnancy; up to 30% less in a period of 12 months. OBJECTIVE. To determine the association between advanced paternal age, seminal quality and DNA fragmentation index.

METHODS. Prospective observational study in which seminal samples of males with infertility diagnoses were evaluated from January 2010 to July 2016, analyzed by means of WHO parameters (2010) and commercial Halosperm method was used to evaluate the DNA fragmentation index (SCD) following the instructions of the distributor. Statistical analysis was performed using JMP 12; using Shapiro-Wilk, a normal distribution of the population was performed and a Spearman correlation with statistical significance of $p < 0.05$.

RESULTS. A total of 347 seminal samples were included, obtaining an average age of 39.13 years (23-58); DNA fragmentation with an average of 23.49% (4-85%). There was a positive Spearman correlation between age and 0.219 DNA fragmentation ($p < 0.0001$). Also finding in the descriptive statistics significant values ??for mobility with an average of 47.48% (1-88%) p 0.0007; normality with an average of 14% (1-71%) p 0.0027. Regarding volume with mean of 2.6 ml (0-9.5 ml) and concentration with an average of 102 mls / ml (1.2-340 mls / ml), no statistical significance was found.

CONCLUSIONS.

It is corroborated that there are deleterious effects with age with respect to seminal quality, particularly in terms of motility and normality. In addition to the strong association there is with an increased DNA fragmentation index. As already described, advanced paternal age, as a non-modifiable factor, is associated with an increase in the frequency of defects in sperm DNA and is strongly associated with oxidative stress, as well as decreased testosterone levels that also affect spermatogenesis. spermiogenesis, DNA packaging and therefore seminal quality

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