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The effects of noise exposure on sperm parameters (count, motility and viability) mice

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Abstract

Noise as one of the most important physical agents in workplace, which is known to have adverse effects on living organisms and biological systems, has been studied repeatedly. Noise negative effects on count, motility and viability of sperm can be considered as important factor in reproduction system. In this study, 16 male mice were used in two groups: case and control. Combined noise with 8000-500 Hz bandwidth and with sound pressure level 100±2 dBA for 10 days in two consecutive weeks was created using the software cool edit tools. Then, 35 days after the end of exposure animals were killed and their testes were separated for sperm analysis. The results of this study showed that in the case group progressive sperm (31.4 ± 1.9), immotile sperm (35.9 ± 3.4) and sperm viability (64.8±4.3) are significantly decreased compared to controls group ($P<0.001$). However, for sperm count per million (3.2±1.1) and the percentage of non-progressive sperm (33.6±3.4) were not significantly different ($P>0.05$). Noise exposure may have negative effects on sperm quality.

Keywords: Noise, Sperm parameters, Mice.

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