

The effect of low-level laser irradiation on dog spermatozoa motility is dependent on laser output power.

Corral-Baqués MI, Rivera MM, Rigau T, Rodríguez-Gil JE, Rigau J.

Post-Degree Laser Medical Study, Rovira i Virgili University, Reus, Spain. marcignasi@yahoo.co.uk

Biological tissues respond to low-level laser irradiation and so do dog spermatozoa. Among the main parameters to be considered when a biological tissue is irradiated is the output power. We have studied the effects on sperm motility of 655 nm continuous wave diode laser irradiation at different output powers with 3.34 J (5.97 J/cm²). The second fraction of fresh dog sperm was divided into five groups: control, and four to be irradiated with an average output power of 6.8 mW, 15.4 mW, 33.1 mW and 49.7 mW, respectively. At 0 min and 45 min after irradiation, pictures were taken and a computer aided sperm analysis (CASA) performed to analyse different motility parameters. The results showed that different output powers affected dog semen motility parameters differently. The highest output power showed the most intense effects. Significant changes in the structure of the motile sperm subpopulation were linked to the different output powers used.

PMID: 18787758 [PubMed - indexed for MEDLINE]