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Thesis Title	The Effect of Low - level laser exposure on the Motility of HUMAN Non- Active Sperms			
Year	2015			
Abstract	<p>Male factor infertility is responsible of about 20% of the total infertility causes. Seminal fluid analysis is the first test that must be done to study the count, shape, and the activity of sperms. Sperm motility is a major factor, because sperm has to move and reach the ovum to complete the fertilization. Thus immotile or poor active sperms need assisted reproductive techniques (ART). Laser is widely used in medicine, and many types are available. He-Ne laser [low level laser (LLL)] is one of the most commonly used laser in medical field, because of its low damaging power to the tissues.</p> <p>The aim of this study was to evaluate the effects of different doses of low level (He-Ne) laser on the sperm motility. In this study, 100 semen samples were selected of infertile patients referred to Alnadear Almoshea Clinical Laboratory from different infertility clinics, in the period from February 2014 to August 2014. Standard seminal analysis was done to measure sperm concentration, motility and morphology according to WHO 2010 guideline. Each sample was divided into 3 equal volumes of 1 ml. The first untreated part was used as a control. The others two parts were employed as a treatment groups. The first treatment group was irradiated by (He-Ne) laser energy dose of 4 J/cm², at a distance of 1cm. While the second treatment group was irradiated in the same manner but with energy dose of 12 J/cm² for 30 min. computer assisted sperm analysis (CASA) was used to determine the effect of laser irradiation on sperm motility. After examination both treated and non treated samples were incubated in 37°C incubator for 60 min to be re-examined again to observed the late effects of laser on sperm activity. The result shows a significant increase in the percentage of progressive sperms, and decrease in the percentage of immotile sperms. This improvement in the semen motility was does dependent which means that by increasing the laser does,</p>			

a further improvement was seen. But the percentage of non progressive sperm motility was not affected by any treatment dose.

After 60 min incubation, the treated parts were examined again. The results show a non significant improvements in all types of sperm activity, except the immotile sperms reveal a significant increase in the percentage.

From this study results, it can be concluded that using different doses of low level He-Ne laser increase the total sperms motility, and also cause poor continuous improvement in the motility after one hour of laser treatment.