

EFFICACY OF LOW LEVEL LASER THERAPY ON UDDER HEALTH IN CATTLE

Vytuolis Žilaitis, Jūratė Rudejevienė, Romualdas Maruška, Algis Noreika, Genadijus Vorobjovas, Jolita Balsytė
Lithuanian Veterinary Academy, non infectious diseases, Tilzes 18, LT.-47181 Kaunas, Lithuania;
Phone: + 370 37 363402, e-mail: vituolis@lva.lt

Summary. The use of low level laser therapy (LLLT) for pain and inflammation attenuation has been reported in the international literature. The aim of this study was to assess the efficacy of LLLT on udder health in cattle. For the study Lithuanian Black and White cows in their second to fifth lactation with analogous milk production (5000 – 6000 kg) were selected. The cows were allocated into 4 groups: (1) four cows with elevated milk somatic cell count (over 300000 c/ml) and positive bacterial testing results of milk samples, before 60 DM, (2) eight cows with elevated milk somatic cell count (over 300000 c/ml) and positive bacterial testing results of milk samples after 60 DM, (3) seven healthy cows, (4) 75 cows from 4 commercial dairy herds with elevated somatic milk cell counts (over 300000 c/ml). Were used a series infrared diode laser CTII – 8 of near spectrum. The udder of the cow was irradiated once a day for one minute during one week. In all milk samples of irradiated cows, regardless of group, SCC had decreased, showing significant differences after 21 day of irradiation. After irradiation the number of a microbial colonies in cows from groups 1 and 2 had decreased, with a significant effect in the first group. The effect of laser irradiation on microbes is more precise after 21 days. A significant influence of laser irritation on the udders of healthy cows was not established. In conclusion, low level laser therapy on cows with elevated SCC positively influences udder health in cattle.

Key words: low level laser therapy, udder, somatic cell count, cows.