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A comparative study of the effect of low-laser radiation on mast cells in inflammatory fibrous hyperplasia stained or not by toluidine blue

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This study shows a comparative analysis of the effects of low-intensity laser radiation on the mast cell degranulation of inflammatory fibrous hyperplasia stained or not by toluidine blue. The dye was used in order to increase the absorption of the laser light by the tissue. The lesion was divided in three equal parts, and each part received a different kind of treatment. One of them was removed, in order to function as a control; the second part was laser-treated and, then, immediately removed; the last part was superficially stained, laser-treated and, then, immediately removed. The order of the mentioned procedures was randomly changed, so that the time between them would not interfere with the statistical analysis of the mast cell degranulation rates. It was observed that the mast cell degranulation rates were 49% for the control group, 87% for the laser group and 88% for the stained/laser group. There were no significant statistical differences between the laser-treated group and the stained/laser-treated group. However, there was a significant difference between the control and the treated groups ($p < 0,01$).