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Effects at cellular level of epilation with various laser wavelengths applied simultaneously on different skins: two case reports

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Abstract

This study evaluated the effects of laser application of diverse wavelengths applied simultaneously and on different skins. The sample included two participants, a woman with light skin with abdominal hair and a woman with dark skin and hair on the inner part of the lower limbs, who received a laser therapy session. After 45 days from laser application, abdominoplasty and thigh dermolipectomy surgery were performed. In the control sample, the hair follicles were in the anagen phase, showing the presence of Bcl-2 expression. In the treated areas, follicles were observed in an advanced phase (telogen), with the presence of CK-18 and negativity of Bcl-2, highlighting the phase of hair loss at that moment and the complete apoptosis of the investigated follicle. Significant difference was observed in the comparison of the anagen phase (p = .00) and it similarly occurred in the comparison of the telogen phase (p = .00). The presence of a greater amount of follicles in the anagen phase in the control area and follicles in the telogen phase in the treated area demonstrates the efficiency of the laser at different wavelengths when reaching different skin phototypes and hair thickness, being reinforced by apoptosis and cell proliferation markers. Therefore, the hair-removal process has been optimized with various laser wavelengths.

Keywords: Laser and light sources; hair removal; surgery.

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