A Comparison of the Effects of Lipo Prostaglandin E1 and Prostaglandin E1–CD on Free Flap Circulation

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Abstract: We investigated the effects of prostaglandin E1 derivatives, prostaglandin E1–CD and lipo prostaglandin E1, on free flap circulation after the administration of these drugs. Using a laser Doppler flow meter, the blood flow on the flap in fifteen patients was measured continuously after microvascular anastomosis. The intravenous administration of both prostaglandin E1–CD (60 μg) and lipo prostaglandin E1 (10 μg) increased the blood flow by up to 50%. After prostaglandin E1–CD was administered, the flap blood flow increased rapidly, while maintaining its peak level for two hours. It decreased to its original level within 2 more hours. The lipo prostaglandin E1 group required almost one hour to increase its flap blood flow and this effect continued for eight hours.

Key words: Free Flap, Circulation, Prostaglandin E1, PGE1–CD, Lipo – PGE1