Methods: Twenty patients underwent reconstruction of defects in their distal forearm, wrist or hand, using a dorsal forearm adipofascial turnover flap. Twelve males and eight females, with ages ranging from 26 to 80 years were treated. Regarding etiology, eight patients suffered trauma (including 4 crushing injuries), nine had a tumor, and three had burns. One half of patients showed bone exposure and the other half showed tendon exposure. In 18 patients, the lesion occupied the entire length of the back of the hand, and the other two were associated with more than 50% involvement of its surface. Radial artery injury was observed in six patients and ulnar artery injury in two (7%).

Results: The flaps survived in all patients. In one case, there was necrosis in less than 25% of the length of the flap. In all patients, the normal gliding motion of the involved tendons and joints was gained, and the cosmetic result in the donor site was quite acceptable.

Hypothesis: The perforator pattern of vascularization of the dorsal forearm is a subject that is well studied, and based in these anatomic features non-debilitating flaps can be performed successfully in this region with good results in cases of complex injuries to the dorsum of the hand. We describe here our option for reconstruction of these kind of lesions, presenting our cases and results.