BIOENGINEERING AND REGENERATIVE SURGERY: NEW POSSIBILITIES FOR RECONSTRUCTION OF COMPLEX LACKS OF THE UPPER EXTREMITY AND OF THE HAND

INTRODUCTION

The New Reconstructive Ladder: Modifications to the Traditional Model

PROS

CONS

AESTHETIC OUTCOMES NOT ALWAYS SATISFYING

- POSSIBILITY OF HYPO OR HYPER-PIGMENTATION
- TENDENCY TOWARDS RETRACTION
- INADEQUATE COVER OF DEEP PLANES

1. SKIN BIOPSY
   - processed with CD31 antibody resulted in an improvement in the vascularity
2. IMMUNOHISTOCHEMISTRY
   - An increase in number of vessels after lipofilling
   - A statistically significant difference in the mean value of the number of vessels before and after lipofilling

RESULTS

- POSAS scale: statistically significant improvement (p<0.05) after lipofilling, concerning all the variables investigated before surgery
- VAS scale: statistically significant decrease (p<0.05) in pain after lipofilling

CLINICAL CASE

Based on our experience, lipofilling is a technique easy to perform and able to ensure a morpho-functional improvement in all the tested body areas treated with dermal regeneration template and a new possibilities for reconstruction of complex lacks of the upper extremity and of the hand.