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3rd European Conference on

Surgery, Plastic Reconstructive & Aesthetic Surgery

March 25-26, 2019 | Budapest, Hungary

FAT INJECTION: FROM THE CLINIC TO THE LAB AND BACK TO CLINIC

Autologous fat transplantation for soft-tissue augmentation has become increasingly popular in recent years. Fat tissue is abundant, readily available, inexpensive, most compatible and can be harvested easily and repeatedly. However, the overall survival rate of a fat graft is around 60% in most reported studies. This relatively low survival rate is attributed to an early inadequate vascularization of the fat graft blood vessels, increased fat cell apoptosis and subsequently poor intake and viability. Twenty years ago, the author developed a novel animal model in which human aspirated fat was grafted onto the scalp area of Nude mice. This model allowed him and his colleagues to investigate the mechanisms of fat absorbance and to explore the efficacy of new compounds with the potential to increase vasculature and hence the viability of the fat graft. Using this novel, we have tried to solve multiple clinical questions and problems such as: which chemical preparation added to the fat may enhance its uptake, if there is a favourable area to harvest the fat from, what is the best way to prepare the fat before its injection, the role of freezing the fat for further usage. These and many other clinical debates have got answer using this model. The author will describe the principles of the model and the conclusions that have come out using this model through the last 20 years.

Biography

Yehuda Ullmann is the Head of the Plastic Surgery Department and Aesthetic Services at Rambam Healthcare Campus in Haifa, Israel. In addition, he is an Associate Clinical Professor of Plastic Surgery at the Rappaport Faculty of Medicine at the Technion-Israel Institute of Technology. His research interests include increasing viability of autologous fat transplant; wound healing especially burns, and also reconstructive and aesthetic surgery. He has published over 120 articles in peer-reviewed journals. He is also an internationally acknowledged expert in the use of laser and IPL technologies. Between the years 2011-2013 he has served as the President of the Israel Society of Plastic Surgery. Now, he is a part of the Presidency of the Scientific Council of the Israeli Medical Association.

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