Preface

Pre-expanded Perforator Flaps

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Editors

Perforator flap surgery has indeed revolutionized reconstructive plastic surgery. With accurate knowledge of the perforator anatomy, plastic surgeons now can not only raise the skin and subcutaneous tissue as a flap but also spare the muscle for various reconstructions. With more advanced knowledge in perforator anatomy and also imaging studies to identify perforators, a known perforator flap can even be evolved to an unknown freestyle perforator flap as long as a reliable perforator can be identified and can be surgically dissected out. Therefore, advances in perforator flap surgery have definitively improved the outcome of reconstructions with less donor site morbidities.

Tissue expansion is a known technique and has commonly been used mainly for breast reconstructions and scalp reconstructions in North America. Its clinical application would not only minimize donor site morbidities but also improve vascularity within the pre-expanded tissue. The combination of tissue expansion and perforator flap surgery is a relatively new concept and has not fully been recognized as a valid and effective option for reconstructions among plastic surgeons worldwide.

Pre-expanded perforator flap is an innovative approach in plastic surgery that has been used primarily by plastic surgeons to reconstruct various skin defects after release of burn scar contracture. It starts with identification of perforators first and then placement of an expander between two or more identified perforators. After a series of tissue expansions, a pre-expanded perforator flap can be developed with enhanced blood supply within

the flap and has almost no donor site morbidities except a scar. Such a technique can produce a thin or superthin skin flap for reconstruction of a defect in the face, neck, extremities, and hands. It can also provide an adequate amount of flap tissue for organ reconstruction. Although a minimum of a two-stage procedure may be needed, the flap generated by this technique can be used to reconstruct various defects with “like-for-like” tissue and improved overall outcome.

A pre-expanded perforator flap can be designed as a pedicle or free perforator flap. It can become a primary reconstructive option for burn scar reconstruction in various parts of the body. It can definitely become a valid option selected by plastic surgeons to reconstruct various soft tissue defects and achieve unparalleled outcomes compared with some of the traditional techniques used in the past. Most importantly, a pre-expanded perforator flap offers an effective option for reconstruction with well-vascularized flap and minimal donor site morbidity.

This current issue represents an international effort by many renowned plastic surgeons from P.R. China, United States, Turkey, Germany, and Japan, who have made contributions to pre-expanded perforator flaps. The issue starts with an overview of current concepts in pre-expanded perforator flaps followed by an overview of clinical applications for the pre-expanded perforator flap. Imaging studies for perforator flaps are also nicely reviewed. It then includes an article on pre-expanded superthin skin perforator flaps, followed by articles on pre-expanded transverse cervical

perforator flap, supraclavicular perforator flap, internal mammary perforator flap, intercostal perforator flap, thoracodorsal perforator flap, para-umbilical perforator flap, deep inferior epigastric perforator flap, brachial perforator flap, and anterolateral thigh perforator flap. An article on pre-expanded free perforator flaps is also included. In addition, pre-expanded and prefabricated perforator flaps for total nasal, face, and hand resurfacing are also presented in this issue. The last article provides an overview of future perspectives from the two editors for pre-expanded perforator flaps. The reader can discover the innovations from each article as well as the different approaches among experts from different centers or countries.

We would like to express our heartfelt gratitude to all of the contributors for their expertise, dedication, and responsibility to produce such a world-class monograph in plastic surgery. It is certainly our privilege to work with these respected authors in the exciting field of reconstructive plastic surgery. We would also like to express our appre-

ciation to the publication team of Elsevier, who has put this remarkable issue together with the highest possible standard. We sincerely hope that you will enjoy reading this special issue of *Clinics in Plastic Surgery* and find it useful to improve your knowledge and skill in reconstructive plastic surgery.

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