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Complex Venous Pathophysiology: Think Simple

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Microcirculation and anatomy are the two basic principles that we plastic surgeons are continuing to study throughout our professional life.

Basic anatomy rules we have to apply to all our reconstructions, and then we have to anticipate restoration of the circulation, and especially the microcirculation changes and establishment, to define success.

These microcircuits are anatomically defined by the arteriole, the venule and the capillaries and they are influenced by several factors, including O2 radicals, changes in temperature, pH and CO2, medications, inflammation and local or systemic sepsis, and other conditions less clearly defined.

The reperfusion phenomenon is a complication that occurs after cessation and rapid restoration of the circulation in a transplant,often with catastrophic consequences.

In addition, extremity soft tissue ulcers are due to faulty microcirculation.

It is therefore extremely useful to try to recognize risk factors, and especially to measure the factors known to be responsible for microcirculation changes, such as the temperature.

In this issue Katseni et al [1,2] very nicely evaluate temperature changes in patients suffering from leg ulcerations of different remote etiology. The improvement in temperature observed with the use of a very simple and easily used medication is even more interesting and challenging. The combination of the improvement of the risk factors with a medical intervention and the subsequent improvement of the microcirculation, and finally ulceration healing, need to be confirmed with further experimental and clinical research.

Finally, methods of measuring microcirculation in which provide quantitative as well as qualitative data, such as laser Doppler, plethysmography and ICG laser angiography in real time fluorescent imaging, have much to offer to research and clinical practice in this field [3,4].

References

1. Katseni KK, Bramis K, Katsenis K. Beneficial effect of MPFF administration on the healing process of venous ulcer. Hellenic J Surg 2017;89:196-202.
2. Katseni KK, Dimakakos E, Bramis K, et al. The effect of MPFF on skin temperature at different stages of chronic venous insufficiency. Hellenic J Surg 2017;89:203-12.
3. Loupatatzi A, Stavrianos SD, Krantonis F, et al. Are females predisposed to complications in head and neck cancer free flap resonstruction. J Oral Maxillofacial Surg 2014; 72:178-85
4. Stavrianos SD, McLean NR, Fellows S, et al. Microvascular histopathology in head and neck oncology. British Journal of Plastic Surgery 2003;56:140-4.

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