

Could systemic capillary leakage syndrome post-episodic recovery light-up our knowledge about less evident and less known key properties of the lymphatic system?

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Editorial

Lymphatic system is quite neglected. A recent paper [J Physiol 594.20 (2016) pp 5749–5768] enlightens some of its key properties, in pumping back what is leaked by circulation in the vessels.

A tricky functioning of the lymphatic system may massively occur just after episodes of Systemic Capillary Leakage Syndrome, a quite rare pathology implying sudden massive capillary systemic leakage, even of proteins as big as albumine, probably because of a kind of still unknown inflammatory agent recurrently acting in patients suffering by such disease.

The tricky fact is that while recovery of the lost proteins in the circulation bed takes days, thus probably accounting of the maximum capability of the lymphatic system to pump a few liters per day, the liquid massive recovery in blood is much faster, thus probably implying a direct inverse exchange from interstitial liquid to capillary when the inflammatory agent is gone and they start to compact again their walls.

The curious think is that at that time vessels are still depleted of proteins, thus oncotic pressure should pump outside capillaries, unless the lost proteins are not anymore in the interstitial fluid, but already actively sequestered by the lymphatic system at such amount that

hydrostatic pressure from the interstitial increased fluid would not encounter oncotic resistance by a disproportioned concentration of proteins in favor of outbound flux.

A better understanding of such phenomenon could not just light our understanding about the neglected pathology recalled, but as often could stimulate a better understanding of the physiology of a system, like the lymphatic one, so determinant for our recovery from-or at least fighting against-a variety of diseases.

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Conflict of interest

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