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PREFACE:
ADVANCES IN DIALYSIS
IN THE LAST DECADE

In the past decade, kidney replacement therapies have been greatly revolutionized, both for chronic patients and for those with acute kidney injury. In the field of chronic hemodialysis, the development of membranes has allowed to move from low-flux hemodialysis, to high-flux hemodialysis, then to on-line hemodiafiltration, and finally to expanded hemodialysis. Added to this, the implementation of artificial intelligence in chronic hemodialysis units has resulted in not only more efficient and safer treatments but also in more appropriate for the needs of each patient. In peritoneal dialysis, one of the great advances in this decade was the remote monitoring of treatments from the patients' homes, being able to detect mechanical and physiological problems earlier thereby achieving interventions on time for preventing complications in the long term.

In the setting of patients with acute kidney injury, it has been shown that high-volume automated peritoneal dialysis is an excellent option for these patients. Regarding continuous renal replacement therapies, the past decade was pivotal since recommendations were established for when, to whom and the starting dose, as well as the quality indicators that should be monitored. Finally, hemoadsorption in the context of sepsis, inflammation, and poisoning took a great leap, since a large number of cartridges with different designs and indications have been developed and are being studied to determine how to use them appropriately.

All of these biotechnological advances have translated into better biochemical, clinical, and quality of life outcomes for patients living with end-stage chronic kidney disease or acute kidney injury. This special issue of the RIC Clinical and Translational Investigation – is focused on all these biotechnological advances in the field of kidney replacement and hemoadsorption therapies in the past decade.

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