

Extracorporeal fluid removal (Slow continuous Ultrafiltration) in patients with hypervolemia and congestive heart failure

Seyed Hossein Ardehali MD

Associate professor, Shahid Beheshti University of Medical sciences, Tehran, Iran

Fluid overload may occur in patients with heart failure. In all cases, cardiac support can be achieved by the optimization of fluid balance, the reduction in organ edema and the restoration of desirable levels of pre- and afterload. Further complications may arise when cardiorenal syndromes develop and the kidneys are unable to eliminate the accumulated fluid.

Diuretics represent the first line of treatment, although in some case they may be ineffective or even dangerous for the patient. In these conditions, extracorporeal ultrafiltration may be required.

In most conditions, continuous extracorporeal therapy may result in remarkable cardiovascular stability with maintenance of hemodynamic parameters, including mean arterial pressure, heart rate and systemic vascular resistance.

Slow Continuous ultrafiltration (SCUF) was first used in 1980 as an alternative mode of fluid removal for patients with oliguric acute renal dysfunction from whatever causes. The advantage of this treatment is that hemodynamic parameters remain stable in the presence of significant removal of fluid.

Key words: fluid overload, ultrafiltration, extracorporeal therapy