Fluid Status and IDPN

Fluid management in dialysis is complex and vital for patient health. Current evidence indicates a multidimensional approach including fluid and sodium restriction in combination with adequate time on dialysis and improvements in accurately measuring fluid status are key to successful fluid management.

IDPN, a solution containing amino acids and low dextrose infused during hemodialysis, may support improved fluid management.

Proposed mechanisms*:

Improvement in Albumin

IDPN can offset protein losses during dialysis and thus support protein homeostasis and albumin synthesis. Albumin plays a major role in oncotic pressure that prevents excess fluid from moving into the interstitial space.

Osmotic Pressure

IDPN is 1400-2000mOsm/L, making it a hypertonic solution. In comparison, body fluid is 285-295 mOsm/L. IDPN may work to create an osmotic gradient that drives fluid from the interstitial space to the intravascular space which can support plasma refill during dialysis and allow fluid to be more easily removed.

Considering Fluid Status when Introducing IDPN

IDPN can be introduced using regular procedures for patients who are considered normohydrated or meeting IDWG goals of <5% or per clinic policy.

For patients with mildly excessive IDWG, consider initiating IDPN at a lower volume. Upon request, prescriptions can be compounded at volumes as low as 200-300ml/bag.

For patients with >5% IDWG compared to TW, consider delaying initiation of IDPN. When fluid status improves, request low volume IDPN + Nutriplan 7[SM] to support albumin improvement.

*There is currently no direct research on IDPN and fluid status. Patients with chronic hyperhydration are usually excluded from research to limit confounding factors when analyzing results.

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