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INTRODUCTION

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Hemodiafiltration in 2022: Introduction to the symposium

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BACKGROUND

Hemodiafiltration (HDF) has been practiced now for more than three decades, but online HDF has been shown to offer the best option for an efficient and viable therapy. Its origins derive from the efforts of nephrologists to find the best way to correct uremia in the absence of a functioning kidney transplant. The over-arching strategy of extracorporeal therapies is focused on the removal of uremic toxins as large and as accessible as possible, but also to reduce dialysis-induced biological and hemodynamic stress, to ameliorate patient perception and globally to improve patient outcomes. As hemodiafiltration adds a measurable convective component to the diffusive removal of uremic toxins of conventional hemodialysis, it has been applied and studied worldwide since the early 1990s. Throughout this period, we have learned many aspects of this approach, which we share in this symposium. International contributors from many disciplines present data and expert opinions on the broad expanses of the topic of hemodiafiltration. They report or comment on observational and randomized controlled studies that are completed, on-going, have undergone meta-analyses, and criticized. The cost-effectiveness and sustainability of any therapy must be considered. Understanding the physical principles and technical aspects are critical to the successful application of hemodiafiltration. We have attempted to discuss all these aspects of hemodiafiltration in this symposium. We hope that the readers will share our excitement and appreciation for this important and promising approach to blood purification in end-stage kidney disease.

TABLE 1 Glossary of used abbreviations

Abbreviation	Full term
B2M	Beta-2-microglobulin
BAP	Bone-specific alkaline phosphatase
BP	Blood pressure
CC-HDF	Convection controlled hemodiafiltration
cIMT	Carotid intima-media thickness
CKD	Chronic kidney disease
CMPF	3-Carboxy-4-methyl-5-propyl-2-furanpropionate
Cp	Concentration in plasma
CRP	C-reactive protein
Cs	Concentration in serum
CV	Convective volume
Cw	Concentration in water

(Continues)

TABLE 1 (Continued)

Abbreviation	Full term
DOPPS	Dialysis Outcomes and Practice Patterns Study
EKR	Equivalent renal urea clearance
ESKD	End stage kidney disease
ERI	Erythropoietin resistance index
FGF23	Fibroblast growth factor-23
GCC	Gulf Cooperation Council
GH-Rx	Growth hormone treatment
HD	Hemodialysis
HDF	Hemodiafiltration
HDx	Expanded hemodialysis
HF	High flux
HRQOL	Health-related quality of life
HV	High volume
HVHDF	High-volume hemodiafiltration
IDH	Intradialytic hypotension
IDWG	Interdialytic weight gain
IL	Interleukin
IPD	Individual participant data
IS	Indoxyl sulfate
KDQOL	Kidney disease quality of life
KRT	Kidney replacement therapy
LF	Low flux
LMWH	Low molecular weight heparin
LVM	Left ventricular mass
MAP	Mean arterial pressure
MCO	Medium cut-off (membranes)
MONDO	MONitoring Dialysis Outcomes
MWt	Molecular weight
BPUT	Protein bound uremic toxin
PCS	p-cresyl sulfate
PK-PD	Pharmacokinetic and pharmacodynamic
PSM	Propensity score matching
PTH	Parathyroid hormone
Qb	Blood flow rate
Qd	dialysate flow rate
Qf	Filtration rate
RCT	Randomized controlled trial
RKF	residual kidney function
RO	Reverse osmosis
RR	Relative risk
RRR	Relative risk reduction
RWD	Real world data
RWE	Real world experience
SD	Standard deviation
SDS	Standard deviation score
SLANH	Latin American Society of Nephrology and Hypertension

TABLE 1 (Continued)

Abbreviation	Full term
T	Time
TCeq	Tons of carbon-equivalent
TMP	Transmembrane pressure
TNF	Tumor necrosis factor
TRAP5b	Tartrate-resistant acid phosphatase 5b
UF	Ultrafiltration
UFR or Qf	Ultrafiltration rate
USRDS	United States Renal Data System
V	Volume of distribution, usually of urea
Vf	Volume fraction
VBHC	Value-based health care
WTS	Water treatment system
z	Charge number

To assist in the ease of reading, we present here a glossary of commonly used abbreviations (Table 1).

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