Loss of amino acids during hemodialysis

No registrations found.

Ethical review	Not applicable
Status	Recruiting
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON22996

Source
NTR

Brief title
LAAD

Health condition

Hemodialysis; hemodialyse
amino acid loss; aminozuur verlies
high-flux membrane; high-flux membraan

Sponsors and support

Primary sponsor: Maastricht University Medical Centre+
Source(s) of monetary or material Support: Maastricht University Medical Centre+

Intervention

Outcome measures

Primary outcome

• Total amount of amino acids lost in the dialysate during a routine HD session in the MUMC+ in grams / session and grams / kg body weight

• Change in plasma amino acid concentration in µmol / L

Secondary outcome

• Dietary intake in calories and grams of protein per 24 hours of the outpatient population on chronic HD in the MUMC+

• Handgrip strength in kg

• Lean body mass and relative lean body mass in kg and %, respectively

Study description

Background summary

‘Chronic hemodialysis patients show declined muscle function, exercise performance and quality of life after hemodialysis treatment is necessary. The cause of this decline is suggested to be multifactorial. One of the most important catabolic stimuli present in chronic hemodialysis patients might be loss of nutrients in the dialysate. Amongst these nutrients, amino acids form the most important macronutrients, as these are essential for muscle maintenance. To date, studies which assessed the amount of amino acid loss during hemodialysis did so in fasted patients. However, this might not represent the amino acid loss during routine hemodialysis, during which most patients are allowed to eat and/or drink. Therefore, this study will assess the amino acid loss in chronic hemodialysis patients consuming their habitual diet.’

Study objective

We hypothesize that the amino acid loss in the dialysate during a routine HD session in the MUMC+ will be between 8-12 g/session, resulting in a significant decline in plasma free amino acid concentration.

Study design

Pre (t=0) and post (t=180 - 300) hemodialysis

Every 30 minutes of the hemodialysis procedure (t=30, t=60, t=90, t=120, t=150, t=180, t=210, t=240, t=270).

Intervention

N/A

Contacts

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Eligibility criteria

Inclusion criteria

• Age over 18 years

• Glomerular filtration rate <15 ml/min/1.73m2

• Urine production <100 ml/day

• HD treatment 3 times per week for 3-5 hours per session

• Chronic HD at the MUMC+ for >6 months

Exclusion criteria

• One or more missed HD sessions in the last 4 weeks before participation

• Hospital admission in the last 12 weeks before participation

• Pregnancy

• Infections (infectious diseases, skin infection, infection of mucous membranes, etc.)

• Cognitive disorders

Study design

Design

Study type:	Observational non invasive
Intervention model:	Parallel
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	01-11-2017
Enrollment:	10
Type:	Anticipated

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6906
NTR-old	NTR7101
Other	METC-17-4-071 : METC azM/UM

Study results