LOW MOLECULAR WEIGHT PROTEINURIA AND RISK OF ISCHAEMIC SUFFERENCE

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Introduction

Renal dysfunctions are present in metabolic, cardiovascular, cerebrovascular diseases. The aim of our study was to evaluate proteinuria in cerebrovascular diseases.

Materials and Methods

We recruited 669 acute strokes (AS), 269 chronic cerebrovascular diseases (CCVD), 110 other neurological diseases (OND) patients. Blood and urine samples were gathered within 24 hours from admission.

Results

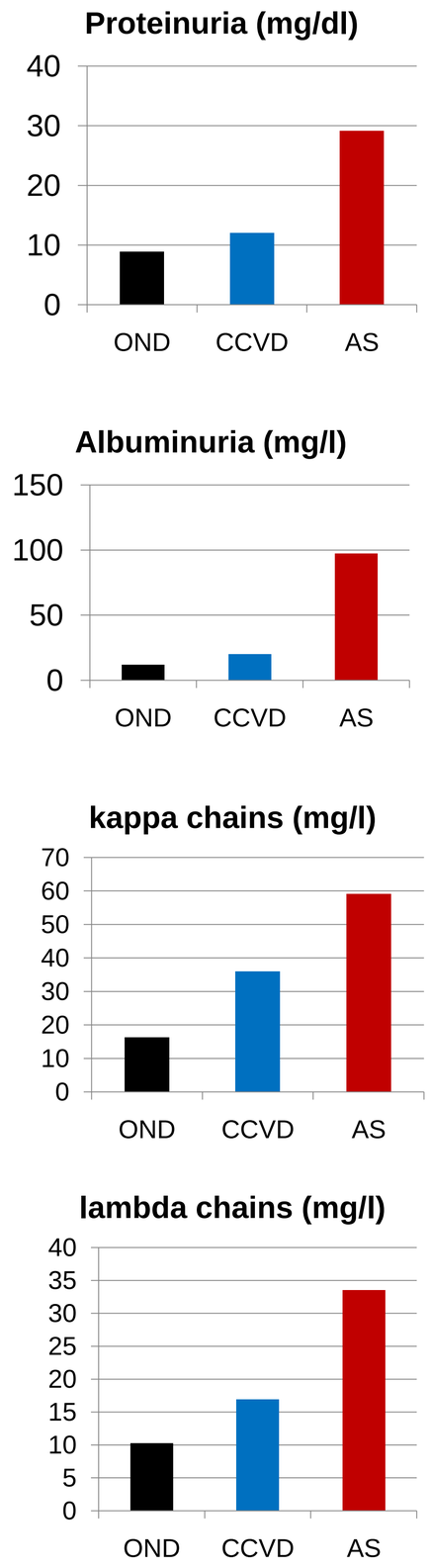
Proteinuria (mg/dl) was observed in 47% AS, 22% CCVD, 21% OND. It was significantly higher in CCVD (12,06 sd 27,17, p 0,03) and AS (29,15 sd 61,03, p 0,0006) compared to OND (8,9 sd 22,6). Levels of albuminuria (mg/l), urinary k and l chains (mg/l) were 97,53 sd 98,41 (p 0,01), 59,23 sd 72,85 (0,02), 33,5 sd 48,41 (p 0,04) in AS, 20,11 sd 26,74 (p 0,03), 35.96 sd 54,39 (p 0,0002), 16,93 sd 23,24 (p 0,005) in CCVD, 12 sd 17,20, 16,23 sd 15,93, 10,29 sd 12,11 in OND, respectively. The reliability of the assays is reported:

	Proteinuria	Albuminuria	k	λ
Sensibility	47%	79%	92%	93%
Specificity	79%	67%	42%	32%
Positive predictive value	93%	93%	90%	89%
Negative predictive value	20%	25%	46%	45%
Precision	51%	68%	84%	85%

Albuminuria correlated with Glasgow Outcome Scale (r -0,62) in AS.

Conclusions

Proteinuria is a red flag in cerebrovascular diseases. Urinary low molecular weight proteins represent an early sign of renal dysfunction and may predict a higher risk of ischaemic sufferance. Albuminuria already reflects a structural damage, correlated with invalidating outcomes. Further studies are needed to assess the risk in asymptomatic subjects.



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