Poppelaars *et al. J Transl Med (2016) 14:245*
DOI 10.1186/s12967-016-1004-8

Journal of Translational Medicine

ERRATUM

Open Access

Erratum to: Strong predictive value of mannose-binding lectin levels for cardiovascular risk of hemodialysis patients

Felix Poppelaars[1*†], Mariana Gaya da Costa[1†], Stefan P. Berger[1], Solmaz Assa[2], Anita H. Meter-Arkema[1], Mohamed R. Daha[1,3], Willem J. van Son[1], Casper F. M. Franssen[1] and Marc A. J. Seelen[1]

Erratum to: J Transl Med (2016) 14:236
DOI:10.1186/s12967-016-0995-5

Unfortunately, the original version of this article [1] contained errors in the main text and in Tables 2 and 3. Tables 2 and 3 were included incorrectly. The correct Tables 2 and 3 have been updated in the original article and are also included correctly in this erratum.

Additionally, the following section has been corrected:

However, after adjustment MBL for these confounders levels remained associated with cardiovascular events, indicating a direct and independent effect of MBL on cardiovascular risk.

Should read:

However, after adjustment for these confounders, MBL levels remained associated with cardiovascular events, indicating a direct and independent effect of MBL on cardiovascular risk.

*Correspondence: f.poppelaars@student.rug.nl
†Felix Poppelaars and Mariana Gaya da Costa contributed equally to this work
[1] Division of Nephrology, Department of Internal Medicine, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands
Full list of author information is available at the end of the article

Table 2 Baseline characteristics of hemodialysis patients presented as groups according to MBL levels

	Patients			P* < 0.001	R	P#
	All (n = 107)	MBL low 319 < ng/mL (n = 26)	MBL high 319 ≥ ng/mL (n = 81)			
MBL range (ng/mL)	821 [319–1477]	98 [33–146]	1290 [671–1848]			
Demographics						
Age, years	62.5 ± 15.6	65.3 ± 12.1	61.56 ± 16.6	0.3	−0.26	*0.007*
Male gender, n (%)	71 (66)	17 (65)	54 (67)	1.0		
Current diabetes, n (%)	25 (24)	9 (35)	16 (20)	0.2		
Hypertension, n (%)	85 (84)	22 (88)	63 (83)	0.8		
Cardiovascular history, n (%)	26 (25)	9 (35)	15 (19)	0.1		
BMI, kg/m^2	25.8 ± 4.4	27.0 ± 4.5	25.4 ± 4.4	0.1	−0.03	0.8
Hemodialysis						
Dialysis vintage, months	25.5 [8.5–52.3]	18.2 [7.0–47.7]	32.8 [9.1–53.3]	0.2	−0.01	0.9
Primary renal disease, n (%)						
Hypertension	18 (17)	4 (15)	14 (17)	1.0		
Diabetes	14 (13)	5 (19)	9 (11)	0.3		
ADPKD	13 (12)	3 (12)	10 (12)	1.0		
FSGS	9 (8)	4 (15)	5 (6)	0.2		
IgA nephropathy	4 (4)	0 (0)	4 (5)	0.6		
Chronic pyelonephritis	3 (3)	0 (0)	3 (4)	1.0		
Glomerulonephritis	13 (12)	2 (8)	11 (14)	0.7		
Other diagnoses	16 (16)	6 (23)	10 (12)	0.2		
Unknown	17 (16)	2 (8)	15 (19)	0.2		
Ultrafiltration volume, L	2.55 ± 0.78	2.54 ± 0.82	2.56 ± 0.78	0.9	−0.01	0.9
Ultrafiltration rate, mL/kg/h	8.56 ± 2.63	7.81 ± 2.39	8.80 ± 2.67	0.1	0.04	0.7
Systolic blood pressure						
Predialysis, mmHg	140.4 ± 25.1	144.7 ± 26.4	139.1 ± 24.7	0.3	−0.17	0.08
Postdialysis, mmHg	131.8 ± 25.6	136 ± 24.3	130.4 ± 26.0	0.4	−0.24	*0.02*
Heart rate						
Predialysis, bpm	73 [63–82]	71 [62–82]	74 [64–82]	0.3	0.11	0.3
Postdialysis, bpm	79 [69–87]	75 [65–86]	79 [69–88]	0.4	0.13	0.2
Kidney transplant, n (%)	21 (20)	4 (15)	17 (21)	0.8		
Laboratory measurements						
Hematocrit, %	34.9 ± 3.8	34.5 ± 4.1	35.0 ± 3.7	0.6	0.04	0.7
HbAlc, mmol/mol	5.68 ± 0.98	5.80 ± 0.97	5.63 ± 0.98	0.5	−0.15	0.2
Albumin, g/L	39 [37–42]	39 [37–42]	39 [37–42]	0.9	0.01	0.9
pH	7.37 [7.34–7.39]	7.37 [7.32–7.39]	7.37 [7.34–7.39]	0.7	0.05	0.6
Calcium, mmol/L	2.31 ± 0.16	2.31 ± 0.15	2.32 ± 0.16	0.9	0.03	0.7
Phosphate, mmol/L	1.67 ± 0.53	1.82 ± 0.47	1.65 ± 0.54	0.2	−0.00	0.9
hsCRP, mg/L	6.7 [2.8–10.9]	6.1 [1.4–12.0]	6.7 [3.0–10.9]	0.7	0.10	0.3
Medication						
Aspirin, n (%)	57 (54)	11 (42)	46 (64)	0.3		
Calcium channel blockers, n (%)	14 (13)	3 (12)	11 (14)	1.0		
β-Blocker, n (%)	61 (57)	18 (69)	43 (53)	0.2		
ACE inhibitor, n (%)	10 (10)	3 (12)	7 (9)	0.7		
AT2-receptor antagonists, n (%)	14 (13)	2 (8)	12 (15)	0.5		
Statin, n (%)	20 (19)	5 (19)	15 (19)	1.0		
Diuretics, n (%)	8 (8)	3 (12)	5 (6)	0.4		

Italic values used to show which statistical testing was significant (below 0.05)

Data are presented as mean ± SD or median [IQR]

BMI body mass index, *ADPKD* autosomal dominant polycystic kidney disease, *FSGS* focal segmental glomerulosclerosis, *HDA1c* hemoglobin A1c, *pH* potential hydrogen, *hsCRP* high sensitive C-relative protein, *ACE* inhibitor angiotensin-converting-enzyme inhibitor, *AT2 receptor antagonists* Angiotensin II receptor antagonists

P* indicates P value for the difference in baseline characteristics between the MBL groups, tested by Student's t test or Mann–Whitney U test for continuous variables and with χ^2 test for categorical variables; *R* indicates Spearman correlation coefficient between MBL levels and the baseline characteristic; P# indicates the corresponding P value

Table 3 Associations of MBL levels with cardiovascular events and cardiac events in 107 chronic hemodialysis patients

	Low MBL			Log MBL continuous		
	HR	95 % CI	*P*	HR (per SD)	95 % CI	*P*
Cardiovascular events						
Model 1	2.64	1.36–5.13	*0.004*	0.64	0.46–0.90	*0.01*
Model 2	2.75	1.39–5.44	*0.004*	0.61	0.43–0.88	*0.008*
Model 3	2.94	1.45–5.94	*0.003*	0.61	0.42–0.89	*0.01*
Model 4	3.55	1.70–7.40	*0.001*	0.58	0.40–0.84	*0.004*
Model 5	3.98	1.88–8.42	*<0.001*	0.56	0.38–0.81	*0.002*
Cardiac events						
Model 1	2.60	1.10–6.18	*0.03*	0.71	0.46–1.10	0.1
Model 2	2.49	1.04–5.96	*0.04*	0.73	0.46–1.16	0.2
Model 3	2.65	1.08–6.55	*0.03*	0.74	0.47–1.18	0.2
Model 4	3.82	1.48–9.87	*0.006*	0.62	0.38–1.01	0.06
Model 5	3.96	1.49–10.54	*0.006*	0.59	0.35–0.98	*0.04*

Model 1: crude

Model 2: adjusted for age and gender

Model 3: adjusted for model 2 plus ultrafiltration volume and dialysis vintage

Model 4: adjusted for model 3 plus cardiovascular history, diabetes and post-HD systolic blood pressure

Model 5: adjusted for model 4 plus hsCRP

Data are presented as hazard ratio (HR) plus 95 % confidence interval (CI) according to the cut-off of MBL and per standard deviation (SD) MBL increase

Italic values used to show which statistical testing was significant (below 0.05)

MBL mannose-binding lectin, *HD* hemodialysis, *hsCRP* high sensitive C-reactive protein

Author details

[1] Division of Nephrology, Department of Internal Medicine, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands. [2] Department of Cardiology, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands. [3] Department of Nephrology, Leiden University Medical Center, University of Leiden, Leiden, The Netherlands.

The online version of the original article can be found under doi:10.1186/s12967-016-0995-5.

Published online: 24 August 2016

Reference

1. Poppelaars F, Gaya da Costa M, Berger SP, Assa S, Meter-Arkema AH, Daha MR, van Son WJ, Franssen CFM, Seelen MAJ. Strong predictive value of mannose-binding lectin levels for cardiovascular risk of hemodialysis patients. J Transl Med. 2016;14:236. doi:10.1186/s12967-016-0995-5.