Supplementary Materials

Urinary titin N-fragment evaluation in a randomized controlled trial of beta-hydroxy-beta-methylbutyrate for acute mild trauma in older adults

Table S1. Comparison between groups among patients with follow-up evaluation during hospitalization

	HMB	GFO	p
n	20	15	NA
Age, years	84.2 (5.0)	86.5 (7.3)	0.271
Male , n(%)	9 (45.0)	6 (40.0)	1
SOFA maximum	3.0 [2.0 to 4.2]	4.0 [3.0 to 5.0]	0.114
APACHE II	10.0 [8.0 to 12.5]	12.0 [9.5 to 18.0]	0.248
CCI	2.0 [1.0 to 4.0]	1.0 [1.0 to 2.0]	0.221
ISS	4.0 [4.0 to 9.0]	9.0 [7.5 to 9.0]	0.156
Head and neck	4 (20.0)	4 (26.7)	0.954
Face	0 (0.0)	1 (6.7)	0.884
Chest	6 (30.0)	4 (26.7)	1
Abdomen	5 (25.0)	3 (20.0)	1
Extremities and pelvis	7 (35.0)	6 (40.0)	1
Surface	20 (100.0)	15 (100.0)	NA
Length of hospitalization, day	25.0 [16.8 to 43.0]	23.0 [15.5 to 29.0]	0.433
ICU admission, n(%)	3 (15.0)	0 (0.0)	0.338
Death, n(%)	1 (5.0)	1 (6.7)	1
Follow up evaluation day	13.8 (2.1)	13.6 (2.3)	0.735
RFCSA			
pre, mm2	2.4 (0.8)	2.2 (0.6)	0.402
post, mm2	2.3 (0.8)	2.3 (0.8)	0.94
change, mm2	-0.0 [-0.6 to 0.4]	0.2 [-0.1 to 0.4]	0.342
Grip strength			

pre, kg	10.9 (7.1)	8.4 (6.7)	0.286
post, kg	11.0 (7.9)	10.2 (7.1)	0.764
change, kg	0.0 [-1.3 to 2.7]	0.0 [-0.6 to 2.2]	0.726
Barthel Index			
pre	100.0 [90.0 to 100.0]	100.0 [90.0 to 100.0]	0.651
post	15.0 [8.8 to 56.2]	40.0 [12.5 to 57.5]	0.639
change	-62.5 [-85.0 to -28.8]	-50.0 [-75.0 to -32.5]	0.688
N-titin/Cre			
day1, pmol/mgCre	22.3 [15.6 to 26.7]	23.1 [16.4 to 39.4]	0.536
day3, pmol/mgCre	26.6 [18.9 to 40.3]	20.2 [14.1 to 28.9]	0.423
change, pmol/mgCre	5.9 [0.9 to 21.0]	-0.4 [-5.7 to 13.1]	0.161

Data were shown as means ± SD or medians [IQR]. HMB = beta-hydroxy-beta-methylbutyrate; RFSCA = cross-sectional area of the rectus femoris, N-titin/Cre = spot urine titin N-fragment divided by spot urine creatinine multiplied by 10.

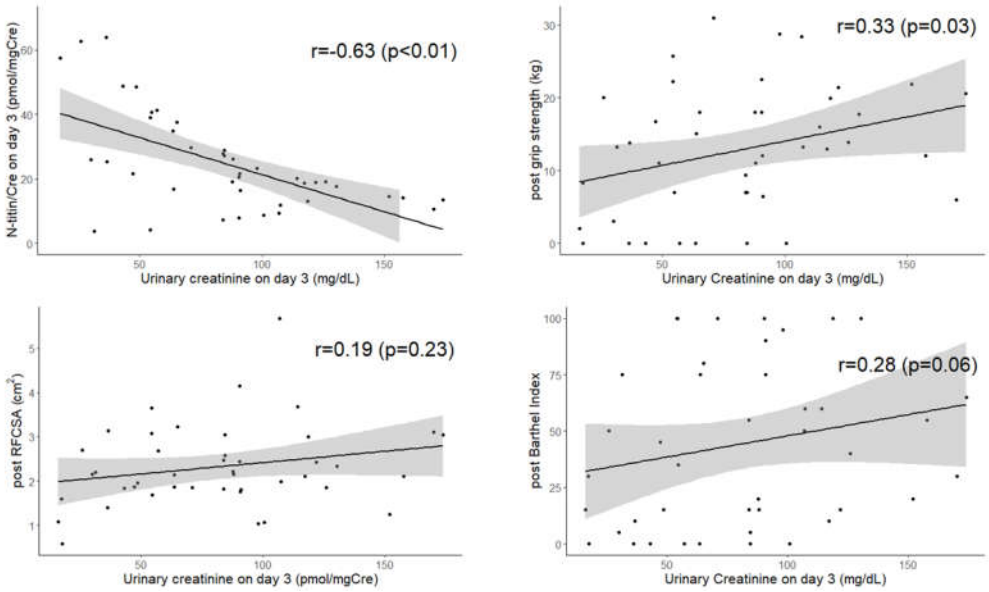
Table S2. Comparison between groups of patients with outpatient follow-up evaluation

	HMB	**GFO**	**p**
n	4	10	NA
Age, years	81.5 (6.0)	82.4 (5.8)	0.8
Male , n(%)	3 (75.0)	4 (40.0)	0.554
SOFA maximum	4.0 [1.5 to 6.2]	2.5 [1.0 to 4.0]	0.515
APACHE II	10.0 [8.8 to 11.0]	8.5 [8.0 to 10.8]	0.565
CCI	0.5 [0.0 to 1.2]	1.0 [1.0 to 2.8]	0.272
ISS	2.5 [1.0 to 5.2]	8.5 [4.0 to 9.0]	0.216
Head and neck	3 (75.0)	5 (50.0)	0.798
Face	0 (0.0)	0 (0.0)	NA
Chest	0 (0.0)	3 (30.0)	0.607
Abdomen	0 (0.0)	0 (0.0)	NA
Extremities and pelvis	1 (25.0)	2 (20.0)	1

Surface	0 (0.0)	0 (0.0)	NA
Length of hospitalization, day	6.0 [4.5 to 7.0]	4.0 [3.2 to 5.8]	0.565
ICU admission, n(%)	4 (100.0)	10 (100.0)	NA
Death, n(%)	4 (100.0)	10 (100.0)	NA
Follow up evaluation day	18.8 (4.6)	17.4 (2.5)	0.479
RFCSA			
pre, mm2	2.9 (0.7)	2.4 (0.6)	0.246
post, mm2	3.2 (1.3)	2.7 (1.5)	0.587
change, mm2	0.3 [-0.5 to 1.1]	0.4 [-0.1 to 0.9]	1
Grip strength			
pre, kg	20.1 (1.4)	13.4 (6.7)	0.075
post, kg	24.7 (4.9)	17.4 (9.9)	0.196
change, kg	3.4 [0.9 to 7.1]	2.5 [0.5 to 7.7]	0.777
Barthel Index			
pre	100.0 [100.0 to 100.0]	100.0 [100.0 to 100.0]	0.353
post	100.0 [100.0 to 100.0]	95.0 [60.0 to 100.0]	0.06
change	0.0 [0.0 to 0.0]	-5.0 [-10.0 to 0.0]	0.06
N-titin/Cre			
day1, pmol/mgCre	27.5 [18.2 to 37.6]	20.6 [11.7 to 26.8]	0.355
day3, pmol/mgCre	29.8 [25.2 to 34.4]	13.0 [8.7 to 17.7]	0.079
change, pmol/mgCre	-1.1 [-8.7 to 5.2]	1.0 [-3.0 to 2.6]	0.782

Data were shown as means ± SD or medians [IQR]. HMB = beta-hydroxy-beta-methylbutyrate; RFSCA = cross-sectional area of the rectus femoris, N-titin/Cre = spot urine titin N-fragment divided by spot urine creatinine multiplied by 10.

Figure S1 Correlation of urinary creatinine with N-titin/Cre and muscle injury endpoints



In scatter plots, the regression line is shown as a solid line, with 95% confidence intervals as shaded areas. Comparison of N-titin/Cre and urinary creatinine on day 3 showed an inverse correlation (r=-0.63, p<0.01), but the correlation between urinary creatinine and the muscle injury endpoints was inferior to that between N-titin/Cre and the muscle injury endpoints.

RFCSA = cross-sectional area of the rectus femoris; N-titin/Cre = spot urine titin N-fragment divided by spot urine creatinine multiplied by 10.