

Title

Association of initial prednisolone dose with remission, relapse, and infectious complications in adult-onset minimal change disease

Authors

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Supplemental Table 1. Remission rate and time to first remission according to initial PSL dose

	Total (n = 91)	Group L (n = 45)	Group H (n = 46)	p value
First remission within 4 weeks, n (%)	68 (74.7)	30 (66.7)	38 (82.6)	0.08
First remission within 8 weeks, n (%)	79 (86.8)	37 (82.2)	42 (91.3)	0.20
First remission within 16 weeks, n (%)	83 (91.2)	40 (88.9)	43 (93.4)	0.44
First remission within the entire observation period, n (%)	87 (95.6)	44 (97.8)	43 (93.5)	0.32

	Total (n = 87)	Group L (n = 44)	Group H (n = 43)	p value
Time to first remission, days	15 [10–25]	17 [10.0–40.5]	14 [10–23]	0.13

PSL, prednisolone. Values are given as n (%) or median [interquartile range], as appropriate.

Supplemental Table 2. Relapse rate, time to first relapse, and dose of PSL at relapse according to the initial dose

	Total	Group L	Group H	p value
Cases in remission	(n = 87)	(n = 44)	(n = 43)	
Relapse rate, n (%)	41 (47.1)	20 (45.4)	21 (48.8)	0.75
Cases in relapse	(n = 41)	(n = 20)	(n = 21)	
Time to first relapse from complete response, months	15.1 [8.2–28.8]	16.5 [7.9–29.4]	13.7 [7.7–28.8]	0.98
Dose of PSL at relapse, mg/kg	0.05 [0–0.15]	0.06 [0–0.14]	0.05 [0–0.19]	0.82
Dose of PSL at first relapse, mg	3.75 [0–10]	4.4 [0.3–9.4]	3.0 [0–12.5]	0.83
Cumulative dose of PSL until first relapse, mg	6590 [5154–10421]	6305 [5118–8978]	7879 [4893–11728]	0.40
Cumulative dose of PSL until first relapse, mg/kg	102.8 [74.4–168.6]	90.4 [65.4–121.3]	140.8 [83.5–217.5]	0.045
Cumulative dose of PSL until first relapse, mg/kg/day	0.23 [0.15–0.34]	0.19 [0.13–0.26]	0.26 [0.19–0.46]	0.048

PSL, prednisolone.

Values are given as n (%) or median [interquartile range], as appropriate.

Supplemental Table 3. Hazard ratios with 95% confidence intervals from multivariable regression analyses of the association of the initial dose of prednisolone (Group L versus Group H) with relapse

	Variables included in regression models	HR (95% CI)	p value
Crude		0.99 (0.53–1.84)	0.98
Model 1	gender, age (per 1 year)	0.86 (0.43–1.72)	0.66
Model 2	Model 1 + Serum creatinine (mg/dL) proteinuria (per 1.0 g/day)	0.87 (0.44–1.75)	0.70
Model 2'	Model 1 + eGFR (per 1 mL/min/1.73 m ²) proteinuria (per 1.0 g/day)	0.88 (0.44–1.76)	0.71

HR, hazard ratio; CI, confidence interval; eGFR, estimated glomerular filtration rate.

Supplemental Table 4. Incidence of adverse events according to the initial PSL dose

	Total (n = 91)	Group L (n = 45)	Group H (n = 46)	p value
Within 6 months	(n = 85)	(n = 41)	(n = 44)	
Infectious complication, n (%)	5 (5.9)	3 (7.3)	2 (4.6)	0.59
AKI, n (%)	48 (56.5)	26 (63.4)	22 (50.0)	0.21
Death, n (%)	3 (3.5)	1 (2.4)	2 (4.6)	0.60
Within 1 year	(n = 80)	(n = 40)	(n = 40)	
Infectious complication, n (%)	5 (6.3)	3 (7.5)	2 (5.0)	0.64
AKI, n (%)	47 (58.8)	26 (65.0)	21 (52.5)	0.26
Death, n (%)	3 (3.8)	1 (2.5)	2 (5.0)	0.56
Within 2 years	(n = 63)	(n = 34)	(n = 29)	
Infectious complication, n (%)	4 (6.3)	2 (5.9)	2 (6.9)	0.87
AKI, n (%)	38 (60.3)	22 (64.7)	16 (55.2)	0.44
Death, n (%)	3 (4.8)	1 (2.9)	2 (6.9)	0.46
Within entire observational period	(n = 91)	(n = 45)	(n = 46)	
Infectious complication, n (%)	10 (11.0)	7 (15.6)	3 (6.5)	0.16
AKI, n (%)	52 (57.1)	28 (62.2)	24 (52.2)	0.33
Death, n (%)	6 (6.6)	4 (8.9)	2 (4.4)	0.38

AKI, acute kidney injury; PSL, prednisolone. Values are given as n (%).

Supplemental Table 5. Multivariable regression analyses (adjusted for gender, age (per year), serum creatinine (mg/dL), proteinuria (per 1.0 g/day), and BMI) of the association of the initial dose of prednisolone (less than 40 mg vs. 40 mg to 45 mg vs. 45 mg or more) with remission

Comparison of groups by prednisolone dose	HR (95% CI)	p value
less than 40 mg/45 mg or more	0.71 (0.28–1.80)	0.48
less than 40 mg/40 mg to 45 mg	0.96 (0.52–1.76)	0.90
40 mg to 45 mg/45 mg or more	0.74 (0.33–1.64)	0.46

HR, hazard ratio; CI, confidence interval.

Supplemental Table 6. Multivariable regression analyses of the association of the initial dose of prednisolone (per 10 mg/day) with remission

	Variables included in the regression models	HR (95% CI)	p value
Crude		1.00 (0.99–1.01)	0.98
Model 1	Gender, age (per year)	1.00 (0.99–1.00)	0.46
Model 2	Model 1 + Serum creatinine (mg/dL) proteinuria (per 1.0 g/day)	1.00 (0.99–1.01)	0.74
Model 3	Model 2 + BMI	1.00 (0.99–1.01)	0.75

HR, hazard ratio; CI, confidence interval.

Supplemental Table 7. Multivariable regression analyses (adjusted for gender, age (per year), serum creatinine (mg/dL), proteinuria (per 1.0 g/day), and BMI) of the association of the initial dose of prednisolone (less than 40 mg vs. 40 mg to 45 mg vs. 45 mg or more) with relapse

Comparison of groups by prednisolone dose	HR (95% CI)	p value
less than 40 mg/45 mg or more	0.60 (0.16–2.18)	0.43
less than 40 mg/40 mg to 45 mg	0.65 (0.25–1.70)	0.38
40 mg to 45 mg/45 mg or more	0.90 (0.31–2.58)	0.90

HR, hazard ratio; CI, confidence interval.

Supplemental Table 8. Multivariable regression analyses of the association of the initial dose of prednisolone (per 10 mg/day) with relapse

	Variables included in the regression models	HR (95% CI)	p value
Crude		1.00 (0.99–1.01)	0.71
Model 1	Gender, age (per year)	1.00 (0.99–1.01)	0.66
Model 2	Model 1 + Serum creatinine (mg/dL) proteinuria (per 1.0 g/day)	1.00 (0.99–1.01)	0.85
Model 3	Model 2 + BMI	1.00 (0.99–1.01)	0.93

HR, hazard ratio; CI, confidence interval.

Supplemental Fig. 1

Cumulative percentage of patients with relapse from first complete remission according to the initial steroid dose. There was no significant difference in the time to relapse from complete remission between Groups L and H according to the results of Kaplan–Meier analysis

