[illegible] age: [illegible]

[illegible]

[illegible] M [illegible], N. L [illegible], L [illegible], G [illegible], F. M [illegible] **, *

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A [illegible] ICLE INF [illegible]

Keywords:
[illegible]
D2/3 [illegible]
[illegible]

A B [illegible] AC [illegible]

Introduction: [illegible] (D). H [illegible] D. [illegible] *versus* [illegible] D [illegible]

Methods: D [illegible] (N = 57) [illegible] (N = 40) [illegible] *versus* [illegible] *versus* [illegible]

Results: D [illegible] D2/3 [illegible]

Conclusion: [illegible] D [illegible]

1. Introduction

[illegible] (D). M [illegible] D [illegible] [1–3] [illegible] [4,5] [illegible] [6]. I [illegible] (*versus* [illegible]) [illegible] E [illegible] *i*+1 [illegible] *i*, [illegible] 1) [illegible] *i*-1 [illegible] *i*).

[illegible] /10.1016/j. [illegible] .2019.01.028
[illegible] 11 [illegible] 2018 [illegible]

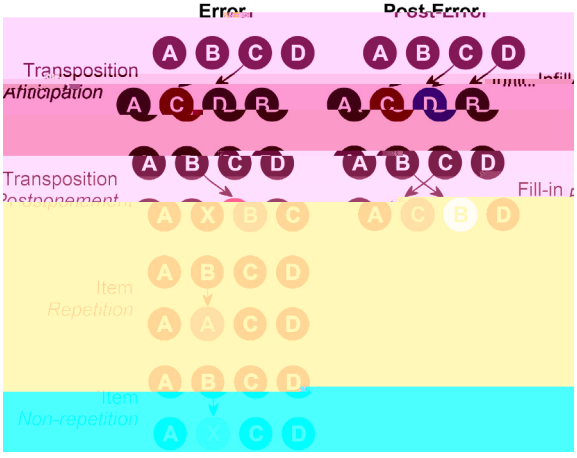

Fig. 1. E . F , .

2. Methods

H . E D H .

2.1. Patients and clinical assessment

132 D (K D B B C D C) H . I 1) 1–3; 3) 50–80 ; 4) ≥9 . E 1) ; 2) (M C A , M-CA < 21/30) (.,) (.,); 3) (B D I II, BDI-II > 7) (.,). F - D A . I D2/3 ff 14 . D (D) III( ). N , M D D C . G L I (MCI) D 15,16 , D (N = 30, M-CA ≥ 26/30) D-MCI (N = 27, 21 ≤ M-CA ≤ 25). fl N -M EM B D E I .

2.2. Healthy control subjects

40 fi .

2.3. Working memory tests and error types

A D , -A 17 . I D , -A, ; ( ) ; ( ) fi 18 . A . F , .

[illegible] (fi -) [illegible] (fi). It [illegible] . A [illegible] . A [illegible] fi t . [illegible] (.M.) [illegible] . I [illegible] fitt [illegible] 0.7% [illegible]

2.4. Statistical analysis

[illegible] fi [illegible] B [illegible] JA . F [illegible] fi t [illegible] ff [illegible] ANOVA [illegible] ANOVA [illegible] (D -A, [illegible]), [illegible] G [illegible] (D, D-MCI, [illegible]), [illegible] A [illegible] G [illegible] t-t [illegible] (t -t [illegible], B [illegible] $p < 0.025$).

F [illegible] fi - [illegible] fi [illegible] ff [illegible]. F [illegible] ff [illegible] ANOVA [illegible] G [illegible] A [illegible] fi [illegible] ff [illegible] D2/3 [illegible] D2/3 [illegible] fi - [illegible] (B [illegible] $p < 0.013$). [illegible]

3. Results

3.1. Test scores

[illegible] 1 [illegible] ANOVA [illegible] ff [illegible] D -A [illegible] C [illegible] 6 , D [illegible] D -A ([illegible], $p < 0.001$) [illegible] D-MCI [illegible] (D -A: $p < 0.001$; [illegible]: $p = 0.001$).

3.2. Error types

H [illegible] fi [illegible] fi [illegible] ff [illegible] ANOVA [illegible] G [illegible] A [illegible] F . 2A [illegible]. F [illegible] ANOVA [illegible] fi [illegible] G [illegible] ($F(2,93) = 7.48$, $p = 0.001$, $\eta^2 = 0.14$) [illegible] ff [illegible] G [illegible] ($F(2,93) = 4.61$, $p = 0.012$, $\eta^2 = 0.09$). [illegible] D [illegible] D-MCI [illegible] D -A (D: $t(68) = 2.44$, $p = 0.017$; D-MCI: $t(65) = 5.47$, $p < 0.001$) [illegible] ff [illegible] ff [illegible] ($p > 0.22$). [illegible] fi [illegible] B [illegible] (2). F . 2B [illegible]. B [illegible]. F [illegible] fi [illegible] G [illegible] ($F(2,93) = 4.95$, $p = 0.009$, $\eta^2 = 0.10$) [illegible] ff [illegible] G [illegible] ($F(2,93) = 5.17$, $p = 0.007$, $\eta^2 = 0.10$). B [illegible] D [illegible] D-MCI [illegible] D -A (D: $t(68) = 2.77$, $p = 0.007$; D-MCI: $t(65) = 4.30$, $p < 0.001$) [illegible] ff [illegible] ff [illegible] ($p > 0.21$).

F . 2C [illegible] fi - [illegible] fi [illegible]. B [illegible]

Table 1
D [illegible] ([illegible] ff [illegible]).

F /M	D (N = 30)	D-MCI (N = 27)	H [illegible] (N = 40)	G [illegible] ff (p [illegible])
M : F	16:14	16:11	20:20	0.76
A ( )	67.6 (7.0)	71.9 (8.0)	66.5 (5.8)	0.12
E [illegible] ( )	14.6 (2.7)	14.2 (3.8)	14.4 (2.0)	0.54
Motor symptoms				
D [illegible] ( )	1.9 (1.8)	2.3 (1.8)	–	0.98
H [illegible]	2.0 (0.6)	2.1 (0.5)	–	0.49
[illegible] D III: M [illegible]	12.1 (4.6)	10.8 (3.0)	–	0.41
Cognition				
MoCA	27.4 (1.2)	24.1 (1.0)	28.2 (1.4)	< 0.001*
A [illegible]	5.4 (2.2)	3.8 (1.7)	7.4 (2.2)	< 0.001*
D [illegible]	7.5 (1.2)	7.0 (1.2)	8.1 (1.0)	0.001*
D [illegible]	4.5 (1.1)	4.1 (1.0)	5.8 (1.8)	0.001*
A fl [illegible]	19.3 (5.1)	15.1 (3.2)	21.2 (5.8)	0.003
Other non-motor functions				
N -M [illegible]	9.5 (4.6)	10.8 (4.7)	–	0.57
B D [illegible] I [illegible] II	2.2 (2.2)	3.4 (2.0)	1.9 (1.9)	0.16
[illegible] EM B [illegible] D [illegible]	4.7 (2.6)	5.4 (3.5)	1.9 (1.4)	0.001*
E [illegible]	5.6 (4.5)	3.7 (3.7)	3.8 (2.6)	0.13
I [illegible]	4.1 (3.9)	4.3 (6.5)	3.0 (2.6)	0.64
Levodopa equivalent daily dose (LEDD)				
[illegible] ( )	272.1 (159.9)	312.2 (181.5)	–	0.62
L [illegible] ( )	146.7 (146.2)	223.2 (152.9)	–	0.16
D2/3 [illegible] ( )	50.4 (45.1)	44.9 (44.9)	–	0.11

MCI, [illegible] ff [illegible], p [illegible] ANOVA [illegible] K [illegible] ANOVA [illegible] (*), fi [illegible] ff [illegible] $p < 0.0025$ (B [illegible]). D [illegible] fi [illegible] D [illegible]; MoCA, M [illegible] C [illegible] A [illegible].

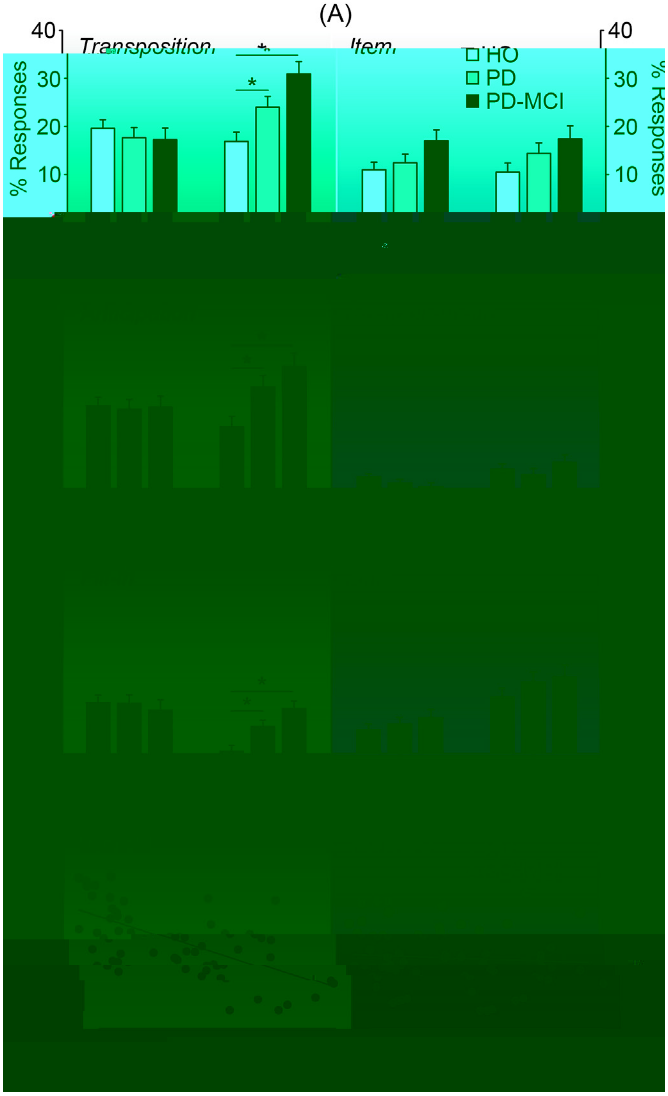

Fig. 2. M … (A) … (B) … (C) fi … (D … -A) … (D) … (D-MCI) … (HC). … A … (*) … fi … ff … ($p < 0.05$). (D) … D2/3 … D … -A …

… 2:1. I … D … -A. F… fi … G … ($F(2,93) = 4.70$, $p = 0.011$, $\eta^2 = 0.09$). B… D … D-MCI … D … -A (D: $t(68) = 3.06$, $p = 0.005$, D-MCI: $t(65) = 4.54$, $p < 0.001$) … ff … fi … ff … ($p > 0.21$). … ff … fi … (HC: 2.2%; D: 2.0%; D-MCI: 3.2%).

3.3. Effect of D2/3 receptor agonists

F … 2D … ff … D2/3 … D2/3 … D … -A ($= -0.56$, $p < 0.001$) … ($p = 0.59$). … D2/3 … H… fi … ($p > 0.10$).

4. Discussion

I … D … D … D. B… D … D … -A, … fi … D. B… D … D … -A … D … M… D … D2/3 … A … D … I … D … -A, D … versus … M… D … fi … M… 12,19–21 … fl …

Table 2

B …

M…	B … (BF$_{10}$)					
	…	It	A t …	…	F -	I fi
… t	3.34	193.54	0.25	45.69	9.95 10^3	6.10 10^5
G…	1.77	0.21	3.58	0.13	0.65	0.23
… t + G…	6.22	43.91	0.92	6.01	8.11 10^3	1.78 10^5
… t + G… + … t G…	1.97 10^3	22.90	27.33	1.50	1.37 10^5	2.44 10^4
A	0.29	0.39	0.41	0.22	0.25	0.25
… t + A	1.00	79.91	0.11	10.53	2.68 10^3	1.65 10^5
G… + A	0.38	0.06	0.90	0.03	0.13	0.05
… t + G… + A	1.34	13.73	0.24	1.57	1.71 10^3	3.72 10^4
… t + G… + A + … t G…	399.36	7.62	6.88	0.41	2.87 10^4	4.96 10^3

D. fi D. 2:1 D. H D -A D D. 22. At 23,24. H D1 D2 25 D2 13. A D2/3 D2/3 D2 26 D. D. 27,28 29,30. H D.

5. Conclusion

D. D D. D D2/3 A D

6. Authors' roles

M N L L G F. M A

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Financial disclosure

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M C

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