Neurocognitive disorders in patients with HIV infection with virological suppression > 10 years

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Background

- HIV Associated Neurocognitive Disorder (HAND) may appear in patients with virological and immunological response to treatment and be unnoticed in the initial stage

- **Aim of this study** - evaluate the development or/and progress of HAND in patients with undetectable plasmatic viral load (VL) in the last ten years

Methods

- **Sample**

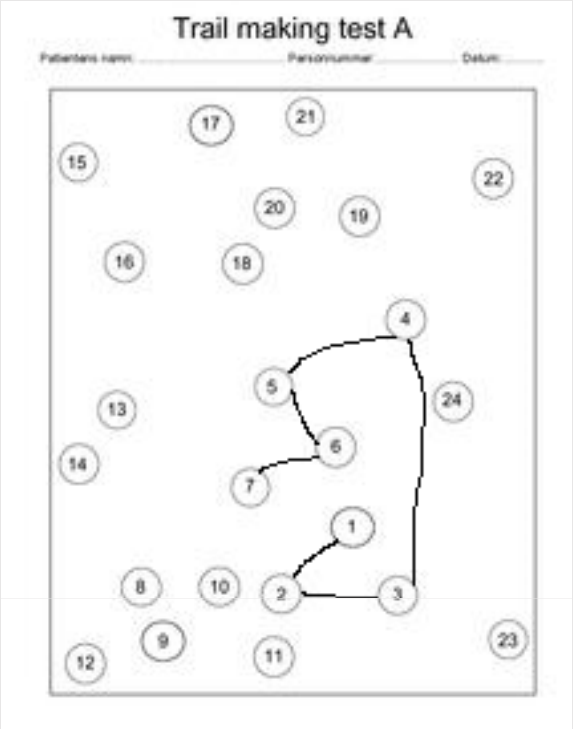
- 25 Adult HIV infected patients
- under ART
- undetectable plasmatic VL for more than ten years (blips included) - evaluated five years before

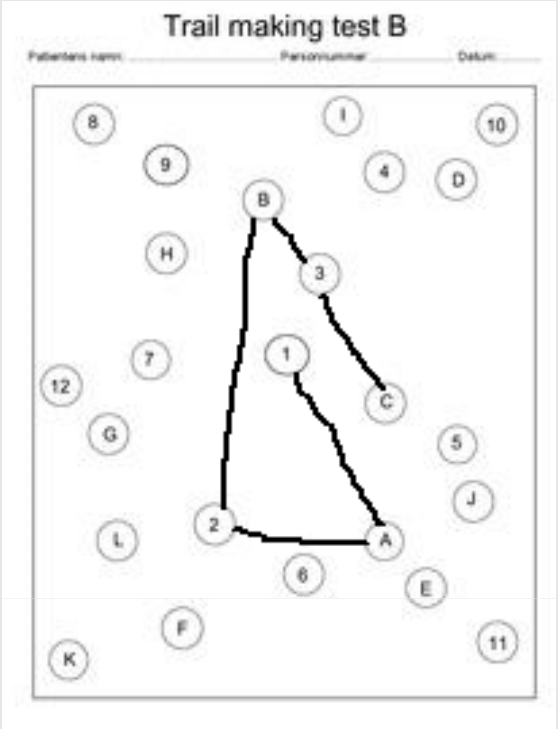
- Demographic and clinical data were analysed (therapeutical regimen, comorbidities, immunological state and number of blips)

Methods

- **Instruments** - Neurocognitive evaluation
  - WAIS-III subtests (digit symbol coding and symbol search) – processing speed
  - Trail Making Test (TMT) A and B – processing speed; executive function
  - STROOP Test – executive function
  - Cathegorical verbal fluence (animals) – verbal fluence

- **Analysis**
  - SPSS version 22.0

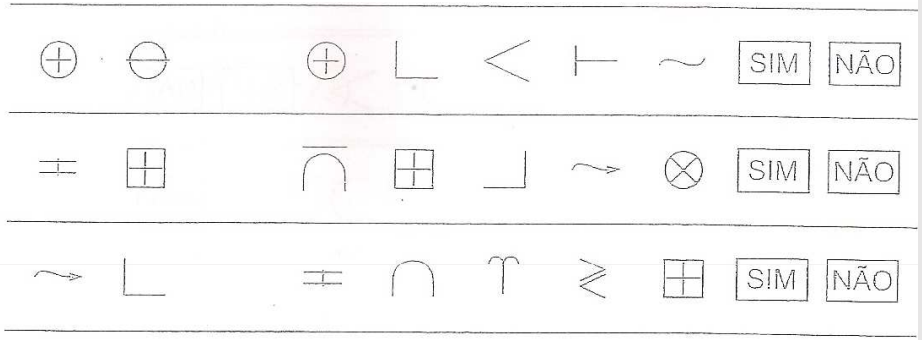




***Noun Fluency* – animals** (in one minut)

dog, cat, bird, bear,...

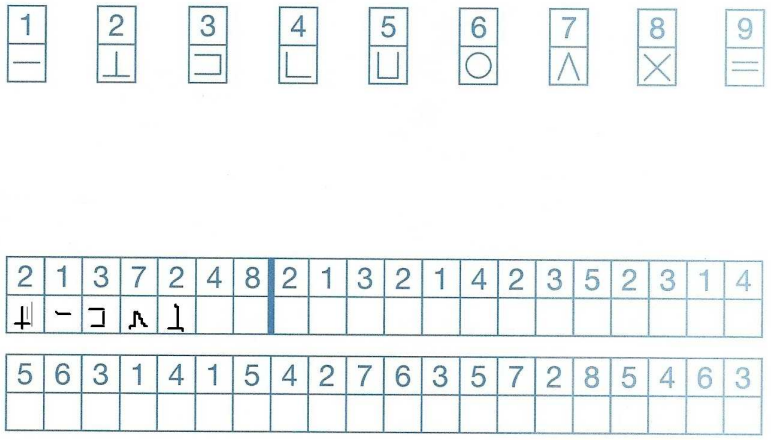
WAIS-III (Symbol Search)



STROOP

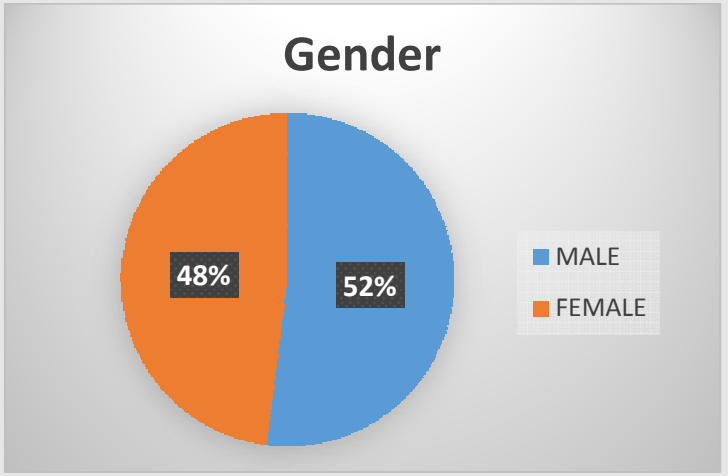
YELLOW BLUE ORANGE
BLACK RED GREEN
PURPLE YELLOW RED
ORANGE GREEN BLACK
BLUE RED PURPLE
GREEN BLUE ORANGE

WAIS-III (Code)



Results

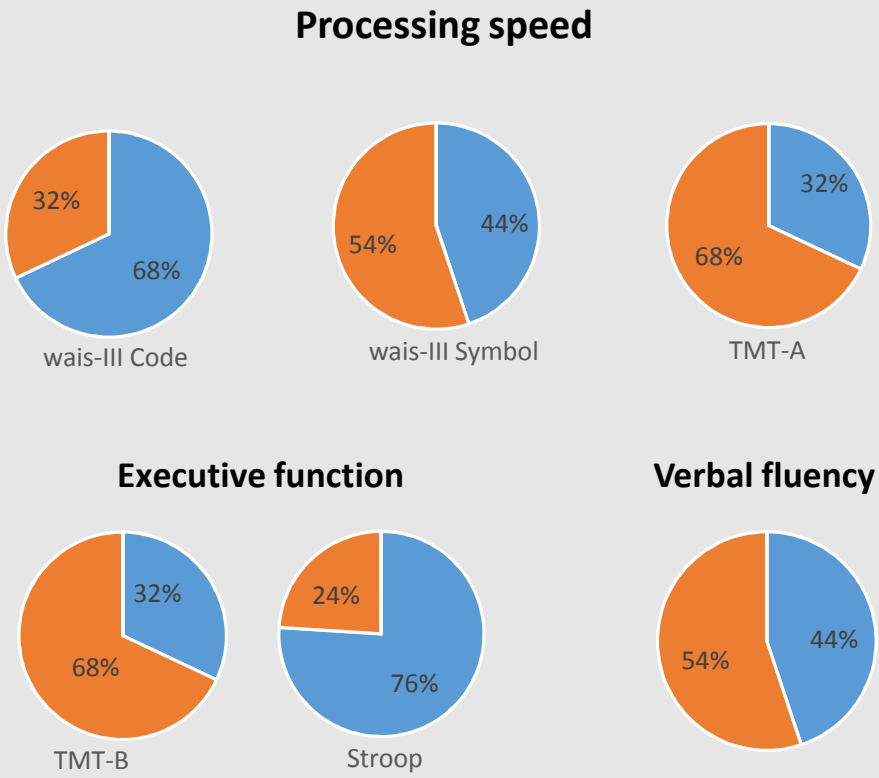
N = 25	Mean	SD
Age	44.34	± 3.34
Education (years)	6.6	± 3.28
Undetectable VL (years)	11.34	± 1.31
Time of HIV diagnosis (years)	17.52	± 3.83
Score of CNS ARTV penetration	7.68	± 1.35



- Seven (28%) patients had AIDS
- Initial median VL of 93.143 copies\mL
- Median CD4+ counts at nadir and at the time of the evaluation of 282 and 660\mm³, respectively

Results

- Evaluation in 10 years (deficit)



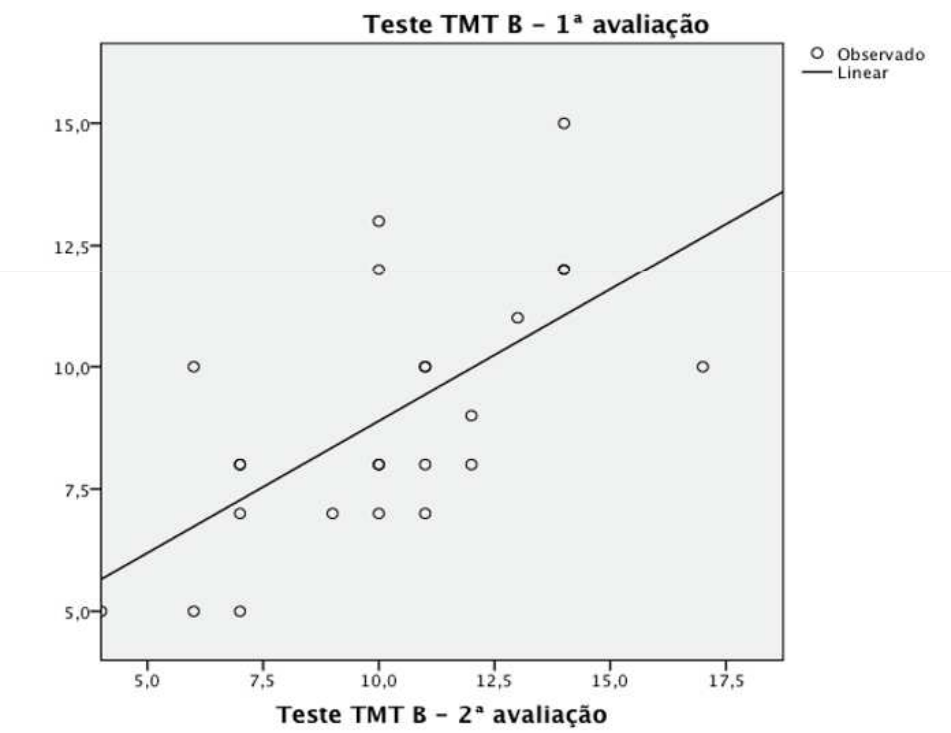
- There were significant statistical differences between the past and current TMT B and Stroop tests' results (p=0.029 and p=0.01, respectively)

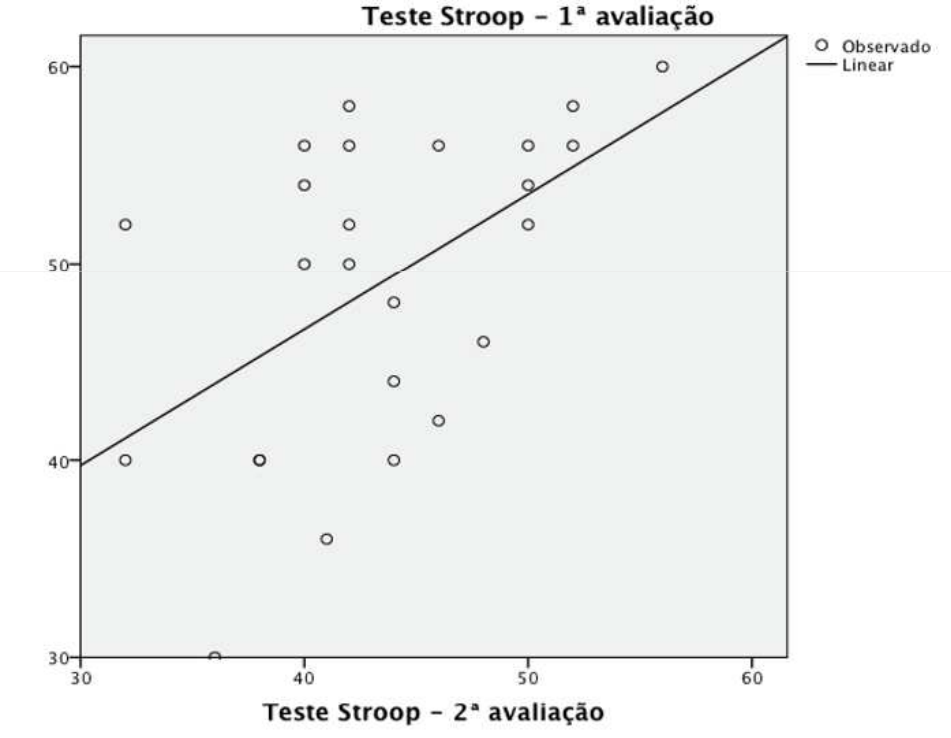
- No differences were foud for the other tests

With deficit
Without deficit

Results

- Evolution 5-10 years





Results

- Evolution 5-10 years

Association 5-10 years (Test – t-ind)		
	TMT-B(p)	**Stroop (p)**
Age	0.217	0.907
Education	0.828	0.267
Score of CNS ARVT	0.234	0.756
Nr.Blips	0.461	0.975
Nadir	0.192	0.490
CD4+ in 10 years	0.572	0.534
Diference CD4+ 10y vs 5y	0.145	0.277
Evolution time	0.678	0.070
Time to supression	0.656	0.712

Association 5-10 years (Teste χ^2)		
	TMT-B (p)	**Stroop (p)**
Gender	0.025	0.910
AIDS	0.344	0.478
CNS Disease	0.609	0.807
Depression	0.629	0.659
Depression treatment	0.132	0.566

- No association was found between the deficit progression and most of the variables studied
- Female gender was associated with worse TMT-B result

Conclusion

- Although it is not generally noticed at normal appointments, in this small population, executive function deficits progression (mental flexibility and divided attention) was found
- Information processing speed and categorical verbal fluence remained stable
- Classical risk factors for HAND did not appear to interfere in its progression

References

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