stroke at older ages and with lower viral load over time suggests a potential change in the pathogenesis of stroke from viral-driven processes to more aging-related risk factors.

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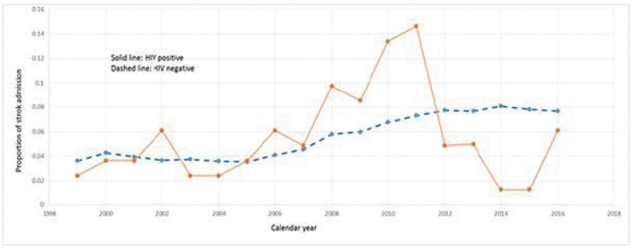
Table. Characteristics of patients hospitalized for a first episode of stroke, 1999-2016

Characteristics	HIV-infected patients		HIV-uninfected patients		p
	N	Cases/N (%)	N	Cases/N (%)	
Demographics					
Age, years	81	49 (1.33)[1]	20,187	65 (0.11)[1]	0.010
Male	81	55 (66)	20,187	9,712 (48)	0.010
Black	81	53 (66)	19,055	7,450 (39)	< 0.001
Smoking	81	46 (57)	20,187	5,943 (29)	< 0.001
Alcohol use	81	14 (17)	20,187	1,370 (7)	< 0.001
Illicit drug use	81	25 (30)	20,187	1,015 (5)	< 0.001
Stroke Outcomes					
NIH Stroke Severity	78		18,293		0.700
Mild		40 (52)		9,037 (49)	
Moderate		28 (36)		6,108 (34)	
Moderate-Severe		5 (6)		1,234 (7)	
Severe		5 (6)		1,914 (10)	
Length of hospital stay, days	81	9 (1.30)[1]	20,187	8 (0.11)[1]	0.430
Inpatient death	78	8 (10)	16,266	1,711 (11)	0.940
Receipt of t-PA	81	6 (7)	18,979	1,545 (8)	0.780
> 1 stroke admission	81	13 (16)	20,187	2,011 (10)	0.090
Pulmonary embolism	67	0 (0)	12,869	30 (0.2)	0.690
Deep venous thrombosis	67	0 (0)	12,870	114 (0.9)	0.440
Myocardial infarction	81	6 (7)	20,187	1,529 (8)	0.930
Aspiration pneumonia	67	0 (0)	12,870	170 (1.3)	0.340
Urinary tract infection	67	1(2)	12,869	346 (3)	0.540

[1]Mean (SE)
SE, standard error; NIH, National Institute of Health; t-PA, tissue plasminogen activator

Figure. Proportion of stroke admissions among HIV-infected and uninfected patients, 1999-2016



* The proportion of stroke admissions for both HIV-infected and uninfected patients is expressed as the number of stroke admissions at calendar year divided by the total number of stroke admissions for each group

549. MoCA Utility as a Quick Testing Tool for Neurocognitive Disorders in HIV Patients: Analysis of a Prospective Cohort

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Background. Since the introduction of highly active antiretroviral therapy, asymptomatic and mild neurocognitive impairment are the main clinical manifiestations of HIV associated neurocognitive disorders (HAND), compromising adherence to treatment, daily performance, quality of life, and even increasing the risk of mortality. We do not have validated screening tools for early detection of HAND applicable to the routine medical visit. The Montreal Cognitive Assessment test (MoCA) is a simple questionnaire used in Alzheimer's disease, but its utility as a screening tool for HAND remains controversial.

Methods. We designed a prospective study to establish MoCA´s usefulness as a rapid and sensitive tool for the detection of HAND, compared with a gold-standard test (GST) that includes Mini-mental State Examination (MMSE) and a battery of assays that evaluate several neurological domains. Adult patients with HIV infection attending our institution were included. The MoCA test was performed by infectious diseases specialists, and the GST by neurologists. History of recent stroke, neurological disease, opportunistic central nervous system infection, major depression, schizophrenia, bipolar disorder, substance abuse or dependence on alcohol, were exclusion criteria. We analized demographic and clinical variables.

Results. Fifty HIV-infected patients were enrolled, 94% males, with a mean age of 45.6 years (range 20–75), and an average of 14.8 years of education (range 3–26). The mean CD4 cell count was 596 cells/ml (range 65–1130), and 70% of the patients had undetectable viral load (≤20 copies/mL) at the time of the evaluation. Compared with GST, MoCA had a sensibility (S) of 94.12% (CI 71.3–99.8), specificity (E) 78.79% (CI 61.09–91.02), positive predictive value (PPV) 69.57% (CI 47–86.79) and negative predictive value (NPV) 96.3 (CI 81–99.9). In contrast, the MMSE presented S 11.76% (CI 1.46–36.44), E 100% (CI 89.4–100), PPV 100% (CI 15.8–100) and NPV 68.75% (CI 53.7–81.3). Cohen's kappa coefficient between MoCA and GST was 0.67 (95% CI 0.46–0.87), reflecting an adequate agreement.

Conclusion. MoCA's performance as a screening test was adequate compared with GST and far superior to MMSE for early detection of HAND. Although specifity could be optimized, MoCA test remains a valuable screening tool in the routine medical visit in our HIV population.

Disclosures. **All authors:** No reported disclosures.

550. Neurocognitive Decline in People Living with HIV in India and Correlation with 3T Magnetic Resonance Spectroscopy

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Background. Neurocognitive decline in asymptomatic HIV patients and its correlation with metabolic changes in brain has not been studied in developing countries like India. In the present study we aim to examine the correlation between cognitive decline and changes in brain metabolites using MRS.

Methods. ART naïve HIV-positive patients, in the age group 2050 years attending ART center of the hospital from July to December 2016 were included in the study. All patients underwent evaluation using MRS of left frontal white matter (FWM) and left basal ganglia (BG). Levels of Nacetyl aspartate (tNAA), choline (tCho), creatine (tCr), lipids and macromolecules at 0.9ppm (Lip09+MM09) were measured. Cognition was tested using a battery validated for Indian population. Locally normalized zscores were used to calculate brain dysfunction score. Spearman correlation coefficient was used to assess the correlation between two continuous variables. There were 28 (29% female and 71% male) cases and 30 (37% female and 63% male) controls.

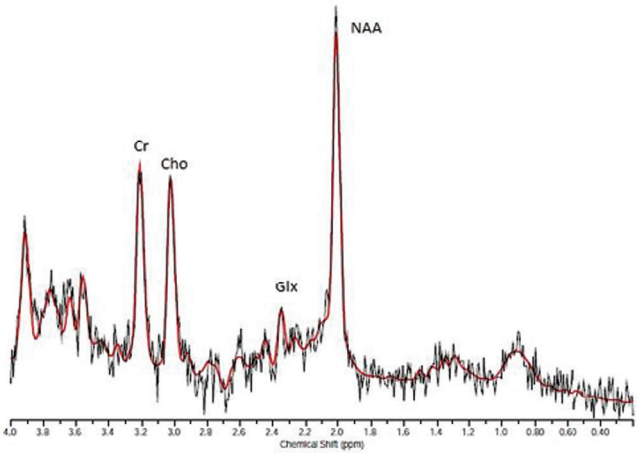
Results. The mean age was comparable in the 2 groups (33 and 34 years). There was a significant difference ($P < 0.05$) in the concentration (mmol/kg) of tNAA (9.29 ± 311 vs. 7.45 ± 0.64), tCho (2.08 ± 0.70 vs. 1.74 ± 0.25), tCr (6.95 ± 2.56 vs. 5.43 ± 0.61), in the FWM and Lip09 + MM09 (5.87 ± 1.05 vs. 4.80 ± 0.35) in BG, with higher levels in controls. There was no significant correlation between CD4 count and metabolites or overall dysfunction score and metabolites except Cr in FWM with more dysfunction associated with lower concentration (see Table 1)

Table 1: MR spectrum acquired from FWM of a patient.

	control n=30		case n=28		p value
	Mean (mmol/kg)	SD	Mean (mmol/kg)	SD	
BG tNAA	7.31	0.47	7.37	0.71	0.94
F tNAA	9.29	3.11	7.45	0.64	0.003
BG tCho	1.62	0.17	1.57	0.21	0.32
F tCho	2.08	0.70	1.74	0.25	0.015
BG tCr	6.95	1.51	6.60	0.91	0.29
F tCr	6.95	2.56	5.43	0.61	0.003
BG Glx	13.99	2.89	13.31	2.79	0.39
F Glx	15	6.06	9.93	2.11	0.0004

[Table 1]

Graph 1: MR spectrum acquired from FWM of a patient.



Conclusion. The results show that HIV-associated changes are present in asymptomatic people which may be contributing to the early neurocognitive decline. Knowledge of metabolic changes within studied brain regions can help understand the pathology and design interventions to cater to this unmet need in people living with HIV.