



GENETIC DIVERSITY OF HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 IN DEMOCRATIC REPUBLIC OF CONGO: A REVIEW OF AVAILABLE DATA

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OBJECTIVE:

Review the specifics of the HIV epidemic in the Democratic Republic of Congo (DRC), in terms of different molecular variants of HIV compared to the published location for the country.

METHODS:

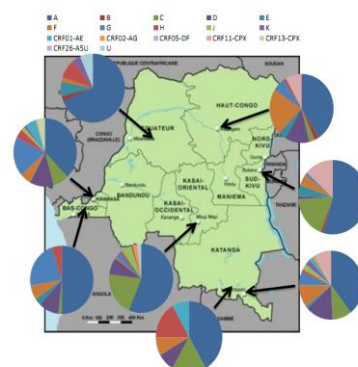
The search of the literature and abstracts presented at conferences with the subject of interest to identify different variants of HIV type 1 in the DRC on the websites of research. Online search was based on the following key words: "HIV subtype, DRC" "genotype, HIV, DRC" and "HIV strains in the Democratic Republic of Congo". It was restricted to the published literatures and presented abstracts between 1997 and 2012. Socio-demographic information of the sample, measurement methods and objectives were considered in the evaluation of the search results.

RESULTS:

According to manuscripts published since 1997, we have noticed a dominating prevalence of group M (100%) and of subtype A at 50.40% [31.2-68.9] for the entire country. In the Eastern part, variants A (44.73%) are dominant on variants C (12.20%), G (11.5%), D (9.12%) and U (7.24%). In the Center, variants A (62.57%) are followed by variants C (10.32%), H (5.02%), U (4.3%) and D (3.9%). In the Western part, variants A (40.91%) are followed by variants G (19.29%), D (10.5%), F (5.65%) and C (4.51%). For the entire country, variants are found in the following order: A (49.40%), G (10.73%), C (9.01%) and D (7.86%). The differences between and within groups are statistically significant for each variants.

Types/Sous-types/CRFs	RDC				
	N=247 [8] en %	Moyenne RDC- Est en %	Moyenne RDC- Centre en %	Moyenne RDC- Ouest en %	Moyenne RDC* en %
M					
A	51,4	44,73 [39,6-53,0]	62,57 [55,8-68,9]	40,91 [23,0-47,5]	49,40 [23,0-68,9]
B	0,4	0,9 [0-4,8]	1,1 [0-2,2]	0	0,67 [0-4,8]
C	7,3	12,20 [1,2-18,2]	10,32 [0-25,0]	4,51 [1,6-13,8]	9,01 [0-18,2]
D	9,3	9,12 [1,2-17,4]	3,97 [0-9,3]	10,5 [4,3-18,2]	7,86 [0-18,2]
E	0	0	3,35 [0-6,7]	1,67 [0-3,2]	1,67 [0-6,7]
F	4,1	2,54 [0-4,8]	1,53 [0-2,2]	5,65 [0-12,5]	3,24 [0-12,5]
G	6,9	11,5 [4,8-21,7]	1,4 [0-3,3]	19,29 [5,3-37,5]	10,73 [0-37,5]
H	7,3	3,49 [0-13,0]	5,02 [0-8,9]	4,4 [0-9,8]	4,30 [0-13,0]
J	2,8	5,2 [0-18,2]	2,58 [0-7,0]	0,83 [0-3,5]	2,87 [0-18,2]
K	3,2	0,7 [0-2,8]	2,63 [0-4,4]	0,56 [0-2,8]	1,30 [0-4,4]
CRF01-AE	1,6	0,7 [0-2,8]	0	2,47 [0-12,5]	1,06 [0-12,5]
CRF02-AG	2,55	2,8 [0-9,1]	1,16 [0-4,65]	0,26 [0-2,1]	1,41 [0-9,1]
CRF05-DF	--	0,35 [0-1,4]	0	0,17 [0-1,4]	0,17 [0-1,4]
CRF11-cpx	--	0,175 [0-0,7]	0	0,08 [0-0,7]	0,085 [0-0,7]
CRF13-cpx	--	0	0	0	0
CRF26-A5U	0	0	0	0	0
U	6,0	7,24 [0-13,2]	4,3 [1,7-6,6]	1,74 [0-7,7]	4,43 [0-13,2]

Circulating Variants in the Democratic Republic of Congo / Souches circulantes République Démocratique du Congo



Geographic distribution of HIV variants /
Distribution géographique des souches du VIH

CONCLUSION:

Several variants of HIV type 1 circulates throughout the DRC. The most prevalent strains (A, G, C and D) in the DRC are all part of Group M (Major). The high number of recombinant forms (CRFs) shows the diversity and dynamics of the virus in this country. This diversity will quickly become a big problem for the fight against HIV in the DRC.