



Prevalence of chronic and acute HIV infection among febrile adults attending emergency departments in urban Tanzania

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BACKGROUND

- WHO recommends systematic HIV screening among patients seen in health facilities in countries with generalized HIV epidemics.
- WHO recommends to repeat testing 4 weeks later in the presence of a clinical indication of HIV infection.
- In resource limited-settings, HIV screening is done by rapid diagnostic tests based on the detection of antibodies which will not allow to diagnose primary HIV infections that could be the reason of fever.
- We aimed to investigate the prevalence of chronic and acute HIV infections among patients with fever attending outpatients clinics in Dar es Salaam, Tanzania.

MATERIALS AND METHODS

- Consecutive adults with acute fever (tympanic temperature $\geq 38^{\circ}\text{C}$ for ≤ 7 days) were recruited in outpatient clinics in Dar es Salaam between July 2013 and May 2014.
- Detailed medical history and clinical examination were done. Rapid diagnostic test for HIV was systematically performed and confirmed in case positivity following national recommendations (chronic HIV infection). All patients with a negative HIV rapid test had an antigen p24 screening (acute HIV infection).
- Additional rapid, culture- and molecular-based microbiological tests were performed according to pre-defined algorithms to investigate the causes of fever.
- During the study period, the prevalence of HIV infection among Tanzanians aged 15 to 49 years in Dar es Salaam was 6.9%.

RESULTS

641 Consecutive adult patients with tympanic temperature $\geq 38.0^{\circ}\text{C}$ attending 4 outpatient clinics during working hours in Dar es Salaam

| Excluded | Reason |
|----------|---|
| 41 | Hospital admission within the last month |
| 31 | Refusal of HIV testing |
| 16 | Fever lasting for more than 7 days |
| 16 | Injury or trauma as main reason for consultations |
| 11 | Previous consultation for the present problem |
| 7 | Delivery in the last 6 weeks |

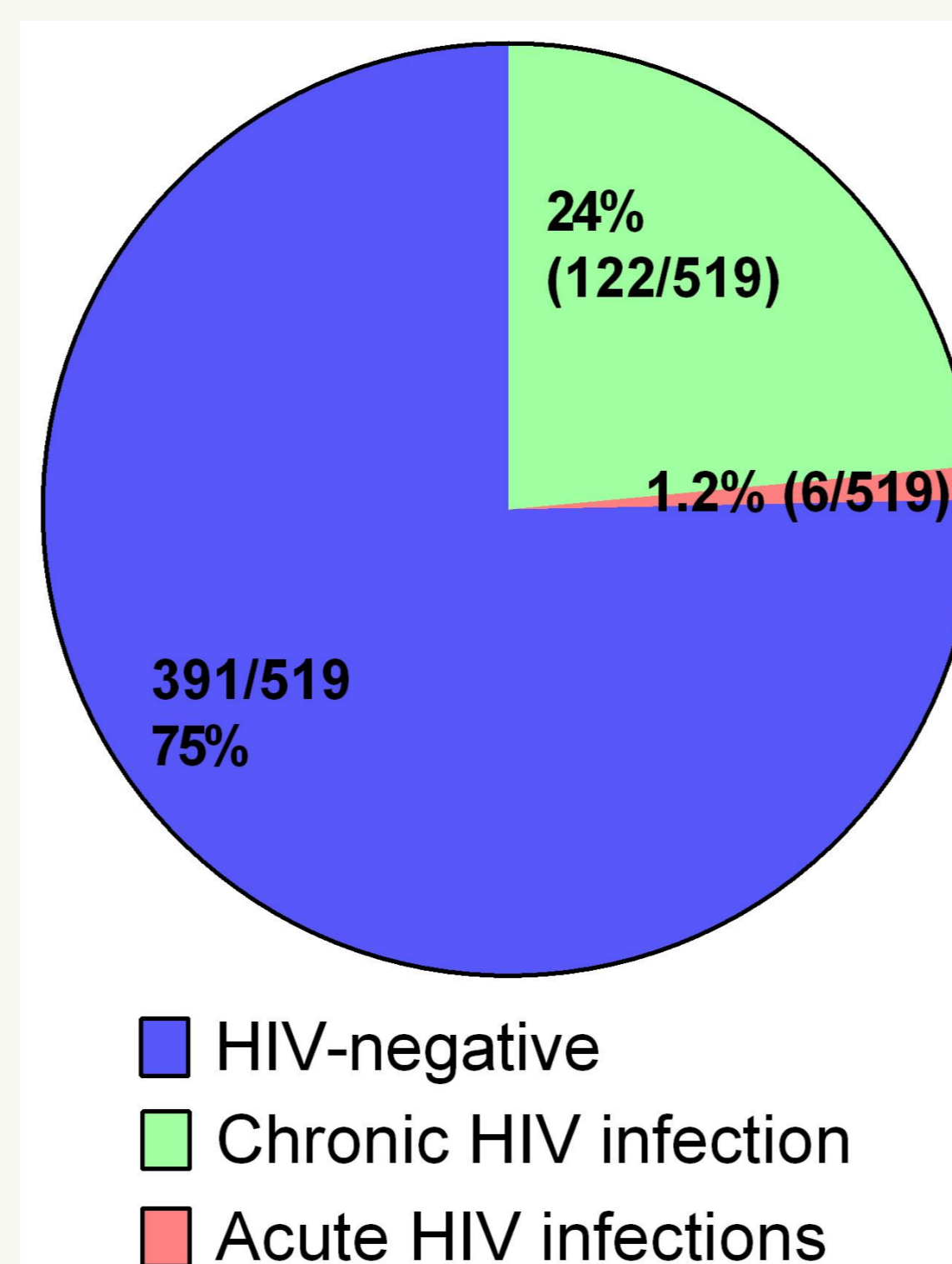
519 Included patients

RESULTS

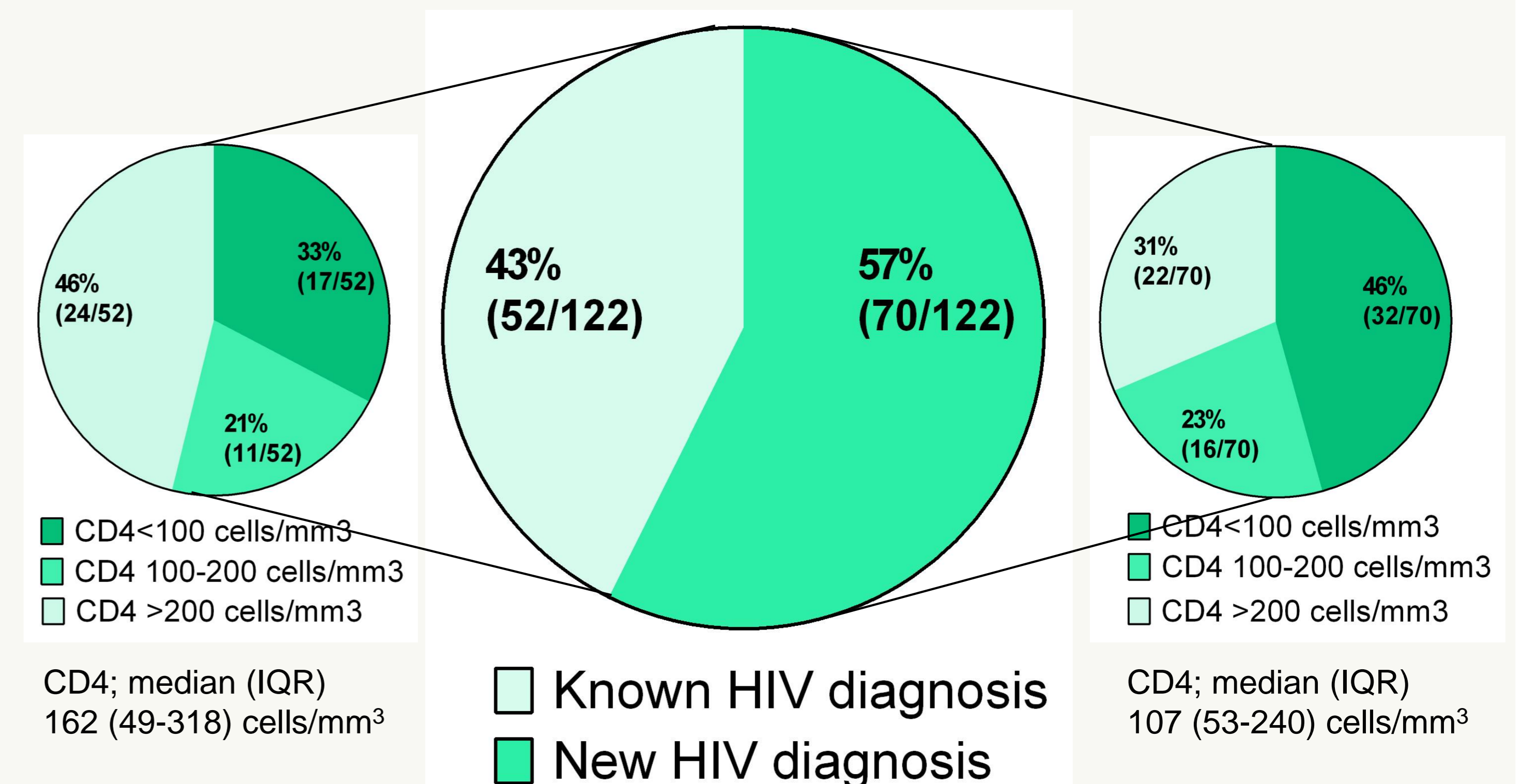
Study population

| | All N=519 | HIV- infected N=128 | HIV-negative N=391 | P value |
|----------------------|----------------------|------------------------|-----------------------|---------|
| | Median (IQR) or N(%) | | | |
| Age, mean (sd) | 30 (23-40) | 35 (29-41) | 27 (22-37) | <0.001 |
| Female sex | 273 (53%) | 81 (63%) | 192 (49%) | 0.005 |
| HIV infection | 128 (25%) | - | - | |
| Socioeconomic status | | | | 0.01 |
| Low | 58 (11%) | 22 (18%) | 36 (9.4%) | |
| Medium | 271 (54%) | 67 (55%) | 204 (53%) | |
| High | 177 (35%) | 33 (27%) | 144 (38%) | |
| Low body mass index | 110 (23%) | 36 (30%) | 74 (20%) | 0.02 |
| Admission | 81 (16%) | 34 (27%) | 47 (12%) | <0.001 |
| 28-day mortality | 32 (6.2%) | 18 (14%) | 14 (3.6%) | <0.001 |

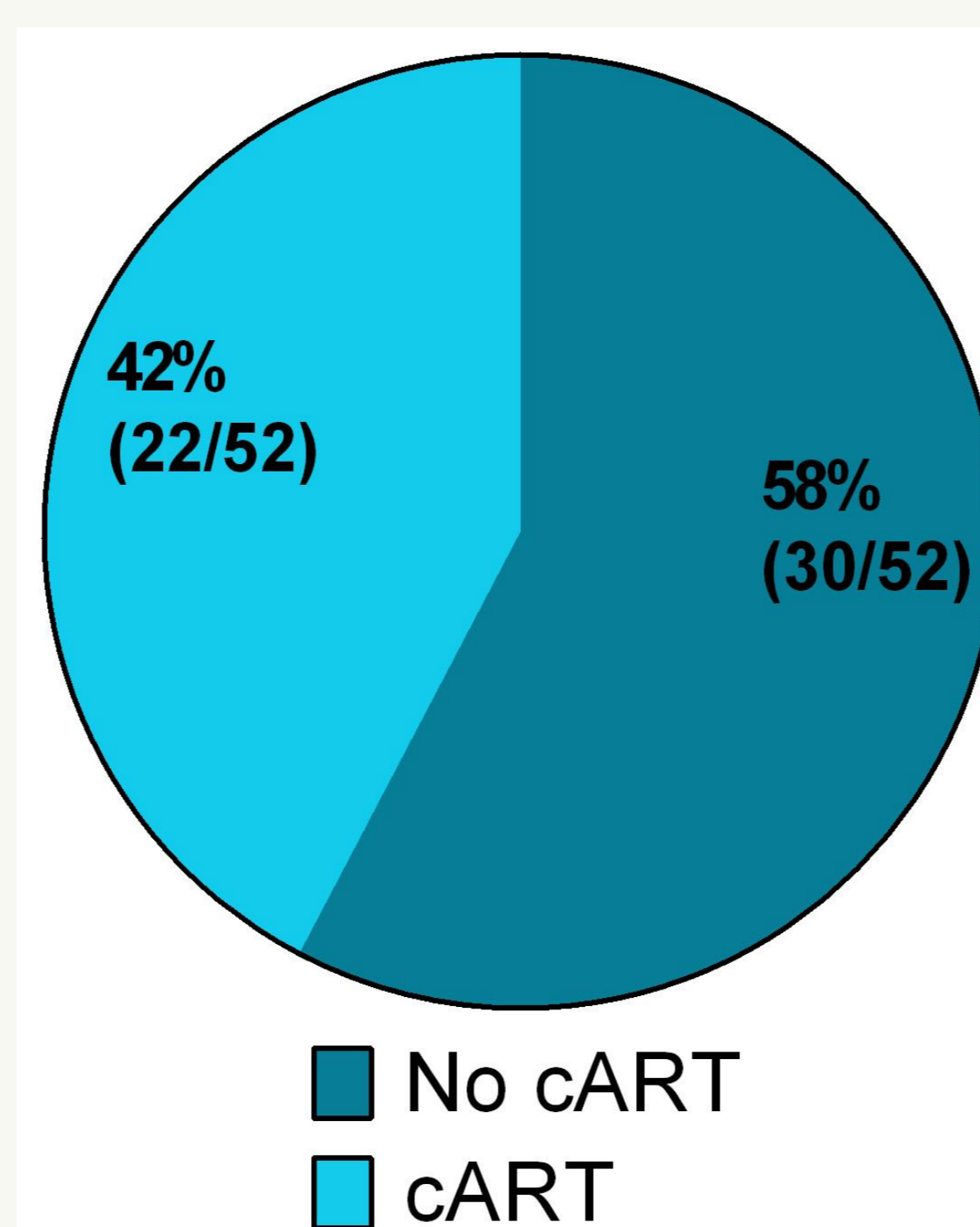
HIV status



122 patients with chronic HIV infection



Known HIV-infected patients and cART



Among 30 HIV-infected patients not receiving cART, 13 (43%) had a CD4 T cell count <350 cells/mm³.

6 patients with acute HIV infection

- Four patients presented with fever without focus
 - one having a rash
 - two having concomitant dengue
- one patients presented with a pharyngitis
- one patients presented with a bronchitis

DISCUSSION

- The high prevalence of HIV infection in this population emphasize the need for systematic HIV screening among febrile adults attending outpatient clinics.
- Every opportunity of HIV screening should be taken as the majority of patients were newly diagnosed for HIV with an advanced disease.
- Linkage to care should improve as more than half of the patients previously known for HIV were not receiving cART despite local guidelines recommending cART for patients with CD4 < 350 cells/mm³.
- It is challenging to identify patients with primary HIV infection as the clinical picture is non-specific and they can present with co-infections.