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PATIENT RELATED FACTORS THAT CONTRIBUTE TO POOR ADHERENCE ON SECOND-LINE HIV TREATMENT

RESULTS FROM A RETROSPECTIVE STUDY OF PATIENTS WITH VIRAEMIA ON SECOND-LINE ART.

Background

Poor adherence is a major challenge to successful second-line HIV treatment in South Africa. With rapid expansion of the HIV treatment program in South Africa, understanding factors that contribute to second-line treatment failure is essential to the future success of the national treatment program.

After July 2012 several facilities in South Africa introduced intensified adherence counselling as part of a standardized, targeted approach for all patients with an elevated viral load (≥400copies/ml) on second-line treatment. Briefly, patients with an elevated viral load are identified and flagged by clinic staff for intensified adherence counselling at their upcoming clinic visit in 1-2 months. At this visit patients bypass the normal clinic queue and undergo detailed intensified adherence counselling and complete a standardized adherence screen. After counselling patients meet with a senior clinician and discuss adherence and possible side-effects. Patients return in 2-4 months for a repeat viral load test.

Previous data shows that two-thirds of patients can re-suppress after intensified adherence counselling (1-3).

A better understanding of the reasons for failure to re-suppress can lead to the design of targeted interventions that reduce the risk of treatment failure among these patients, and ultimately prevent switching to more expensive third-line regimens. We aimed to find factors predictive of failure to suppress viral load (≥400copies/ml) in a cohort of patients with an elevated viral load on second-line therapy.

Methods

Data collection at the study sites

We conducted a retrospective cohort study at Themba Lethu Clinic, a large, urban public-sector clinic in Johannesburg, South Africa. All HIV-positive adults (≥18 years) with a viral load ≥400copies/ml on second-line therapy between 01/2013-07/2014 were included. The analysis was restricted to patients who underwent intensified adherence counselling and for whom a repeat viral load was done within six months of intensified adherence counselling and an adherence counselling questionnaire could be located in their medical file.

For each patient, data from the adherence counselling questionnaire was linked to the patient's electronic medical record (TherapyEdge-HIV™) and patient-level data including information on demographics, medications, laboratory test results and other clinical information were extracted. Depression was defined as reporting at least one of the following; feeling sad or anxious, crying frequently, feeling hopeless, having difficulty sleeping or using alcohol to feel better.

Analysis

Log-binomial regression was used to evaluate the association between patient characteristics and social, behavioural or occupational factors and failure to suppress viral load (≥400copies/ml).

The study protocol was approved by University of the Witwatersrand Human Research Ethics Committee (clearance certificate M141187).

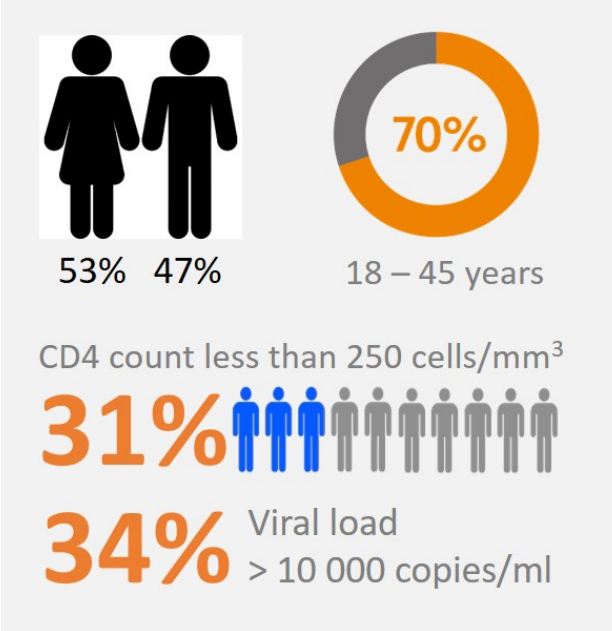

Figure 1: Characteristics of patients at the first elevated viral load on second-line ART and for whom an adherence counselling questionnaire was available (n=154).

Results

Demographics and clinical characteristics

For the study period, 298 patients had a viral load ≥400copies/ml on second-line ART. Of those, 154 (51.7%) had an adherence counselling questionnaire and could be linked to clinical data. Of the 154, 128 (83.1%) had a repeat viral load, of which 61% (78/128) suppressed their viral load after intensified adherence counselling.

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Figure 1: A list of some of the factors that were included in the analysis. Forty-five patient- and provider-related factors were included.

Factors associated with failure to suppress viral load

Patients who presented with significant viraemia (viral load ≥100 000 copies/ml) at the first elevated viral load on second-line ART were two and a half times more likely not to suppress their viral load after intensified adherence counselling than those who had a much lower viral load (10 000–100 000 copies/ml). Compared to those who suppressed, more patients who failed to suppress reported living with family (44.2% vs. 23.7%; p=0.048), missing a dose in the past week (53.3% vs. 30.0%; p=0.010), using traditional/herbal medications (63.2% vs. 34.3%; p=0.006) or symptoms suggestive of depression (57.7% vs. 34.3%; p=0.017).

Policy relevance

We demonstrated that patient-related factors (e.g. use of traditional/herbal medicine, depression, family/social support) but not necessarily provider-related factors, health system factors or treatment related factors contribute to poor adherence on second-line ART. Based on our findings, there is a need for on-going counselling and education of patients on second-line ART. Strategies to support patients, improved adherence evaluation and intensified monitoring need to be considered and evaluated in order to reduce the risk of virologic failure. Competing priorities and life circumstances can play a role in adherence and suppression, and should be taken into consideration when thinking through strategies or interventions to address these.

References

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KEY MESSAGES

- *61% of patients could suppress their viral load after intensified adherence counselling.*
- *Patient-related factors and not necessarily provider-related factors, health system factors or treatment related factors contribute to poor adherence on second-line ART.*
- *Factors associated with failure to suppress viral load after intensified adherence counselling included*

- *These patient-related factors could be targeted for interventions to reduce the risk of treatment failure and prevent switching to expensive third-line ART.*