

Case Report

Clinical Case: Detection of an acute infection Fiebig 1 in a PrEP protocol patient at the Condesa Specialized Clinic

Verónica Ruiz-González^{1*}, Marlene Hernández Sánchez¹, Andrea González-Rodríguez¹, Gerardo Vizcaíno² and Sergio Bautista-Arredondo³

¹*Clínica Especializada Condesa CDMX, Mexico*

²*Comité Humanitario de Esfuerzo Compartido Contra el SIDA, A.C., Mexico*

³*Instituto Nacional de Salud Pública, Mexico*

Abstract

This report describes the detection of a patient in the initial phase of Fiebig I. This patient was included in the PrEP protocol of the Condesa Specialized Clinic (C.S.C.). The analysis of the measured parameters shows that the viral load and the fourth generation test (Ag / Ac) were crucial to identify the evolution of the infection, from the initial phase of Fiebig I to II, in a period of 17 days.

Keywords: Pre-exposure prophylaxis (PrEP); Fiebig classification

Introduction

Pre-exposure prophylaxis (PrEP) is a new biomedical HIV intervention for prevention, in which people who are not infected by the HIV virus, but with high probabilities of contracting it, can prevent the disease. For someone who is constantly exposed to this disease, such as men who have sex with men (MSM) or injection drug users, PrEP represents a powerful tool to prevent HIV infections.

Studies have shown that PrEP reduces the risk of contracting HIV from sex by 99%, if taken daily; and by 74%, among injection drug users. It is important to note that its effectiveness decreases considerably when it is discontinued randomly, and that it is not suitable for the prevention of other sexually transmitted infections [1].

In recent years, more emphasis has been placed on detecting infected individuals at earlier stages. This is because early diagnosis

***Corresponding author:** Verónica Ruiz-González, Clínica Especializada Condesa CDMX, Mexico, Email: vruizgo@gmail.com

Citation: Ruiz-González V, Sánchez MH, González-Rodríguez A, Vizcaíno G, Bautista-Arredondo S (2021) Clinical Case: Detection of an acute infection Fiebig 1 in a PrEP protocol patient at the Condesa Specialized Clinic. AIDS Clin Res Sex Transm Dis 8: 036.

Received: June 21, 2021; **Accepted:** June 30, 2021; **Published:** July 07, 2021

Copyright: © 2021 Ruiz-González V et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

allows physicians to start the treatment immediately. It is important to note that this way, the transmission mechanisms of the HIV virus are interrupted. On the other hand, the knowledge of these mechanisms, the viral dynamics and the immune response of infected patients, allows the advancement of research to develop vaccines and, eventually, eradicate the disease [2].

According to the original Fiebig classification, acute infection is defined as the period between the acquisition of viral infection and the generation of anti-HIV antibodies, which is accompanied by an increase in viremia. Recent infection, which includes the acute phase, represents a period of approximately 6 months, characterized by effective transmission of the virus. People who are in the acute or recent stages play a very important role in the spread of the disease [3].

Clinic Case

A 21 years old male who is candidate to receive PrEP, denies any symptom of acute viremia. He referred occasional use of cocaine and injected methamphetamine, and the use of growth hormone to increase muscle mass, for 18 months. The age of his first sexual intercourse was 16 years old. He is a man who has sex with other men and has had a stable sexual partner for the last 18 months. Moreover, he has been in virological control. He referred to have had 2 irregular partners and his last risky relationship with his stable partner had been on September 6, 2019.

In his initial PrEP visit, the third and fourth generation rapid HIV test results were non-reactive. A plasma sample of the patient was processed for the determination of viral load. This technique was carried out using plasma pools that include 6 to 10 samples. In this case, a pool that included 7 samples was run, getting 77 copies/mL. After analyzing each sample individually, the patient's sample was the only one with a detectable viral load. A subsequent follow-up was carried out, and the results are shown in table 1.

From the analysis of data in Table 1, it is inferred that at the first sampling, the patient was in the initial phase of Fiebig I, between 5.5 and 6 days after acquiring the infection. The patient reported to be asymptomatic, although he had an ascending rate of replication that characterizes the acute viremia. The second sample corresponds to Fiebig stage I, with a viral load large enough to be detected, even at dilutions greater than 1:25. At the time of the third sample, the patient reported the classic symptoms of acute viremia such as headache, fever and general discomfort. At this point, the patient had already evolved to Fiebig stage II, a period time smaller than 7 days.

Conclusion

Using fourth generation tests and viral load, a patient was identified in the initial stage of Fiebig I. Thus, the clinical evolution of the patient from the aforementioned phase to that of Fiebig II was observed, in a span of 17 days. Finally, we concluded that the algorithm

	Sampling I	Sampling II	Sampling III
Date	September 20, 2019	October 01, 2019	07 October, 2019
Fourth generation rapid test	Non Reactive	Non Reactive	Non Reactive
Abbott Ag/Ab	Non Reactive	Non Reactive	Non Reactive
Chemiluminescence Lecture S/CO	0.15	0.87	12.6
Western Blot	Negative	Negative	Negative
Viral Load RT-VIH 1 (copies/mL)	567	191,542	4,130,551

Table 1: Evolution of the parameters measured in the PrEP protocol for a patient in the acute phase.

for inclusion of participants for the PrEP protocol is effective, since it makes possible to adequately identify candidates who are in the acute or recent phase.

References

1. www.cdc.gov/hiv/risk/prep
2. Stekler JD, Tapia K, Maenza J, Stevens CE, Ure GA, et al. (2018) No time to delay! Fiebig stages and referral in acute HIV infection: Seattle primary infection program experience, *AIDS Res Hum Retroviruses* 34: 657-666.
3. Rutstein SE, Ananworanich J, Fidler S, Johnson C, Sanders EJ, et al. (2017) Clinical and public health implications of acute and early HIV detection and treatment: a scoping review, *J Int AIDS Soc* 20: 21579.



- Advances In Industrial Biotechnology | ISSN: 2639-5665
- Advances In Microbiology Research | ISSN: 2689-694X
- Archives Of Surgery And Surgical Education | ISSN: 2689-3126
- Archives Of Urology
- Archives Of Zoological Studies | ISSN: 2640-7779
- Current Trends Medical And Biological Engineering
- International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X
- Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276
- Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292
- Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370
- Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594
- Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X
- Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562
- Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608
- Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879
- Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397
- Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751
- Journal Of Aquaculture & Fisheries | ISSN: 2576-5523
- Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780
- Journal Of Biotech Research & Biochemistry
- Journal Of Brain & Neuroscience Research
- Journal Of Cancer Biology & Treatment | ISSN: 2470-7546
- Journal Of Cardiology Study & Research | ISSN: 2640-768X
- Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943
- Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771
- Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844
- Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801
- Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978
- Journal Of Cytology & Tissue Biology | ISSN: 2378-9107
- Journal Of Dairy Research & Technology | ISSN: 2688-9315
- Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783
- Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X
- Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798
- Journal Of Environmental Science Current Research | ISSN: 2643-5020
- Journal Of Food Science & Nutrition | ISSN: 2470-1076
- Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X
- Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566
- Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485
- Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662
- Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999
- Journal Of Hospice & Palliative Medical Care
- Journal Of Human Endocrinology | ISSN: 2572-9640
- Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654
- Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493
- Journal Of Light & Laser Current Trends
- Journal Of Medicine Study & Research | ISSN: 2639-5657
- Journal Of Modern Chemical Sciences
- Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044
- Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X
- Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313
- Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400
- Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419
- Journal Of Obesity & Weight Loss | ISSN: 2473-7372
- Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887
- Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052
- Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X
- Journal Of Pathology Clinical & Medical Research
- Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649
- Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670
- Journal Of Plant Science Current Research | ISSN: 2639-3743
- Journal Of Practical & Professional Nursing | ISSN: 2639-5681
- Journal Of Protein Research & Bioinformatics
- Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150
- Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177
- Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574
- Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060
- Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284
- Journal Of Toxicology Current Research | ISSN: 2639-3735
- Journal Of Translational Science And Research
- Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193
- Journal Of Virology & Antivirals
- Sports Medicine And Injury Care Journal | ISSN: 2689-8829
- Trends In Anatomy & Physiology | ISSN: 2640-7752

Submit Your Manuscript: <https://www.herallopenaccess.us/submit-manuscript>