

Percutaneous endoscopic gastrostomy as a life saving method for administration of anti-HIV/AIDS treatment in a patient with oral aversion to swallowing medication

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Abstract

Antiretroviral therapy (ART) is the treatment of choice for people living with HIV infection; ART has shown multiple benefits including decrease morbidity, mortality and prevention of HIV transmission from infected individuals to partners. However, adherence failure may cause progression to AIDS and finally death.

We present a case of an homosexual men who has aversion to swallow tablets and progress to AIDS. Percutaneous Endoscopic Gastrostomy (PEG) was introduced as a life saving method to administer ART and avoid death.

Introduction

The benefits of antiretroviral therapy (ART) in decreasing morbidity and mortality in HIV infected patients are well known [1,2]; Recent studies also demonstrated the benefits of ART in the prevention of HIV transmission from infected individuals to partners, as well as pre-exposure prophylaxis for high risk uninfected persons [3]. However, failure to adhere to ART, may rapidly select genetic variants with decreased drug susceptibility resulting in loss of viral control and immunodeficiency [4].

We describe a case of a severely immunocompromized HIV infected patient, that was unable to receive treatment due to a psychological aversion to swallowing tablets.

Case Report

A 29 years old, HIV infected, caucasian, homosexual, male, presented to our clinic with symptoms of fatigue, headache and weight loss. The patient was seen in our clinic and diagnosed after he was presumed to be the source of HIV infection of several young MSM. Laboratory analysis showed a very low CD4 lymphocyte count of 38 cells/ μ l and high plasma viral load of 608,000 copies/ml. He was infected with HIV-1 subtype B. No resistance mutations were found on genotypic testing. Treatment with tenofovir/emtricitabine, efavirenz and prophylaxis for opportunistic infections with sulphamethoxazole/trimethoprim and azithromycin was recommended. One month later he returned to the clinic and reported that he is taking the medications partially due to difficulties in swallowing the tablets. He was counseled to crush the tablets and take them with soft textured food products to his preference. The patient continued to complain about difficulties in swallowing the medication, his weight decreased further and he presented with oral candidiasis. A multidisciplinary team approach including medical staff, nurses, social workers and psychologist was implemented in order to utilize interventions to overcome his non adherence with treatment. The patient was provided with counseling consisting cognitive behavioral techniques and stress management in order to reduce stress and elevate depressed mood. A psychologist guided the patient with a variety of exercises, including progressive muscle relaxation, autogenic training and meditation, and hypnosis. All directed at elevating his oral aversion to solids.

Despite all these interventions, the patient was unable to take the medications prescribed. His clinical condition continued to deteriorate and he developed CMV retinitis, partial blindness in one eye, weight loss of 15 kg and esophageal candidiasis. Total CD4 lymphocyte count was 3 cells/ μ l and viral load was 2.5×10^6 copies/ml. Genotypic resistance analysis showed mutations K219EK and Y181C, implying a

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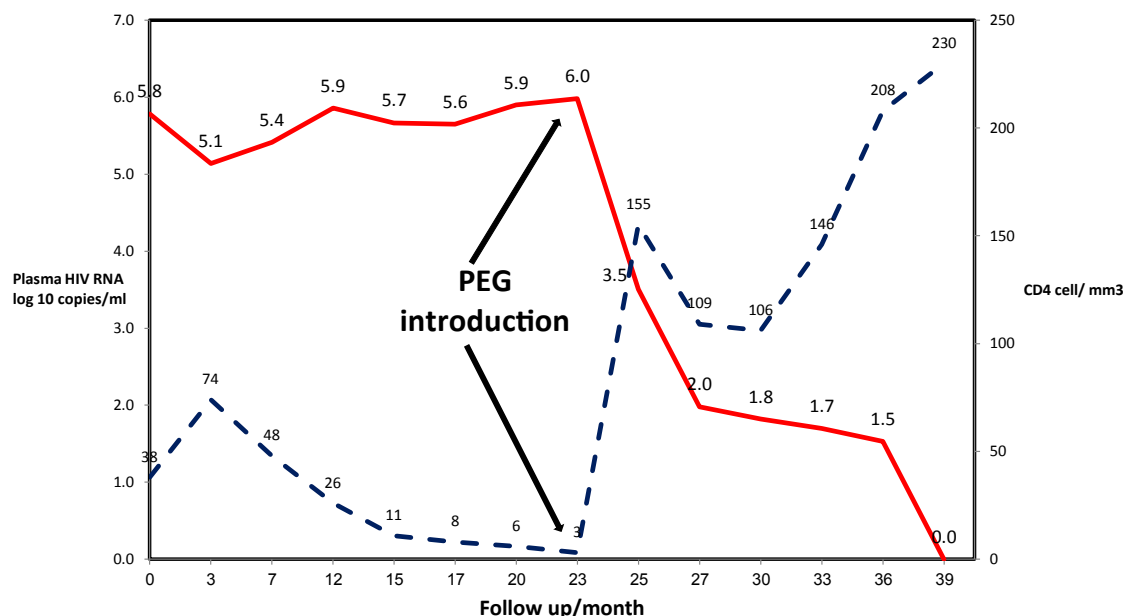


Figure 1: Immunological and virological response to treatment before and after PEG introduction.

varying resistance levels to all NNRTIs (non nucleoside RT inhibitors), potential low level resistance to some NRTIs, but no evidence of resistance to protease inhibitors. Therefore, after considering the critical situation of the patient and the failure to modify his oral aversion, we proposed to utilize a percutaneous endoscopic gastrostomy (PEG) for the administration of medication. Considering that PEG is not routinely used to administer medications, risk about developing severe infections in an HIV/AIDS patient with an advanced immunodeficiency was discussed with the patient. The ART via PEG consisted of liquid preparation of abacavir, and lamivudine, and crushed tablets of darunavir and norvir mixed with liquid. He also received valganciclovir and fluconazole as liquid preparations at standard doses to treat his opportunistic infections. This treatment method led to a rapid clearance of his retinal lesions, vision improvement and complete disappearance of candidial oropharyngeal lesions. There was a sustained increase in his CD4 cell count and a gradual decrease in his viral load. Over a follow up of 15-months the patient feels well, returned to near normal activity, without signs and symptoms of opportunistic infections, showed a weight gain of 17 kg, CD4 lymphocyte count is 230 cells/ μ l and plasma viral load is less than 20 copies/ml (Figure 1). The patient continues with psychological support, but all the efforts done to change his aversion to take an oral regimen, failed.

We describe here, to our knowledge, the second reported case [5] of a HIV infected man with an aversion to swallowing medications, in which treatment with indispensable drugs via a PEG tube resulted in a successful control of his HIV presentation.

Since its introduction in 1980, PEG has gained world-wide

acceptance as a safe technique for providing enteral feeding in patients with poor oral intake due to different clinical conditions. PEG was widely used in HIV/AIDS in the first decades of the epidemic to treat patients with wasting syndrome. PEG tubes can result in complications, but most patients do well with them [6]. Our patient still uses his PEG tube without local or systemic complications.

In conclusion, we consider that use of PEG tube in HIV patients with aversion to oral medications may be a life saving treatment and should be considered as an optional treatment route in extreme situations when all other treatment options have been exhausted.

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