Feasibility of Using Video Visits for Direct Observation of Treatment of Latent Tuberculosis with Twelve Weekly Doses of Isoniazid and Rifapentine

Deborah Gold, MD • Warren Choy, MD • Charles Bradley Hare, MD
Kaiser Permanente, San Francisco, California, USA

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Background

Video visits (VV) have been used for direct observation of treatment (DOT) of active tuberculosis with good results and patient acceptance. Treatment of latent tuberculosis infection (LTBI) using 12 weekly doses of isoniazid (INH) and rifapentine (3HP) is an alternative to a nine month course of INH and requires DOT. This requirement may be a barrier to acceptance of this treatment regimen by both patients and providers. We used VV for 3HP DOT to make treatment of LTBI easier and more convenient.

Methods

Nine adult patients who were referred to the Infectious Disease service for treatment of LTBI chose 12-week 3HP treatment using VV over a standard course of daily INH with monthly telephone visits. Patients had access to a secure video application through a smartphone, laptop or desktop computer. Each VV was conducted by a physician in the patient's preferred language and included a review of medications and side effects and observation of the patient swallowing the dose. We reviewed electronic records to assess feasibility and acceptability of this approach.

Results

TABLE 1. Patient Characteristics	
Age, years (mean, range)	**40 (23-61)**
Sex (F/M)	**7 / 2**
LTBI Test Method (n)	
TST	6
IGRA	2
Both	1
Preferred Language (n)	
English	5
Chinese	3
Khmer	1
Indication for LTBI Treatment (n)	
Biologicals/Immunosuppressants	3
Recent Immigrant	4
Health Care Worker	2
Diabetes	1
Gastric Bypass	1

LTBI = Latent Tuberculosis Infection; TST = Tuberculin Skin Test; IGRA = Interferon Gamma Release Assay

TABLE 2. Outcomes	
Completed LTBI therapy in 12 weeks (N, 100%)	**9 (100%)**
VV Completed (n, %)	**98 (91%)**
Reasons for Failed VV (n = 10)	
Technical Difficulties	8
International Travel	2
VV Venues (n)	
Home	6
Work	1
Car	1
Vacation	1
Side Effects [all mild] (n)	
Nausea	5
Vomiting	2
Abdominal pain	2
Fatigue	1
Tingling	1
None	2

LTBI = Latent Tuberculosis Infection; VV = Video Visits

Each VV took approximately two minutes. VV were free for the patients who saved from $120 to 360 in copays for 12 visits. Of six patients who completed a survey at the end of treatment, all six rated the VV 3HP as excellent and strongly preferred VV to in-person visits for DOT.

Conclusions

Using VV for DOT of 3HP is convenient, flexible and well accepted by patients who have smart phones or computer access. The ease of VV for DOT could encourage more providers to screen and treat patients with LTBI.