Medscape (27.01.2022)

Video-Observed Therapy Tied to Medication Adherence in Patients With Tuberculosis

Rapaport L.

(Reuters Health) - Tuberculosis patients may have better medication adherence with video-observed therapy than with traditional direct observation, a systematic review and meta-analysis suggests.

Researchers examined data from nine studies of people with tuberculosis including 1,091 individuals who received video-observed therapy and 1,309 who had direct observation for treatment.

Among patients in the subset of four studies focused on medication adherence, individuals with video-observed therapy were significantly more likely to be adherent (risk ratio 2.79) than their counterparts who had direct observation. Medication adherence was defined as taking at least 80% of prescribed doses.

In a separate assessment of medication adherence, based on a subset of three studies (1 RCT, 1 cohort study, and 1 pre–post intervention study), the authors focused on the proportion of total prescribed medication doses that patients took. This analysis found the mean number of doses was significantly higher for video-observed therapy than for direct observation (weighted mean difference 0.22).

"Video observed therapy provides more convenience to patients and providers than directly observed therapy because under video observed therapy, tuberculosis treatment can be followed remotely to observe patients taking their medications in front of a computer or smartphone camera in real time or in a recorded video," said senior study author Jingjing Qian an associate professor in the Harrison School of Pharmacy at Auburn University in Georgia.

"The benefits of video observed therapy include its potential of monitoring treatment adherence from distance, time flexibility, greater interactions between healthcare providers and patients, and lower cost," Qian said by email.

Video monitoring methods varied across the smaller studies included in the analysis and could include tools such as videophones, computer software, and smartphone apps like FaceTime. With direct observation, patients needed to have an observer in their home or a clinic setting watch them swallow prescribed medication doses.

Among three studies focused on treatment completion, rates were similar with both video observation and direct observation, the study team reports in the American Journal of Preventive Medicine.

In addition, the researchers examined microbiological resolution of tuberculosis based on data available from a subset of three studies. This analysis suggested that video observation might be superior to direct observation, but the authors also noted that there was too little data to draw firm conclusions about this endpoint.

One limitation of the study is the small number of studies and participants included in the separate analyses for each of the endpoints, the authors note. Another limitation is the heterogeneity around methods of video observation and direct observation, which limits the ability to determine what type of observation might be optimal.

Even so, the results suggest it may be worthwhile for clinicians to consider video modalities as an alternative to direct observation, Qian said.

"We found that the implementation of video observed therapy improved medication adherence and bacteriological resolution compared with that of directly observed therapy in tuberculosis-infected patients," Qian said. "Findings from this study inform clinical practice of tuberculosis management in terms of enhancing the implementation of video observed therapy."

SOURCE: https://bit.ly/3Ayn5kh American Journal of Preventive Medicine, online December 13, 2021.