

EFFICACY AND SAFETY OF THE VIDEO-OBSERVED TREATMENT IN PATIENTS WITH PULMONARY TUBERCULOSIS

Malic A., Niguleanu A., Osipov T., Lesnic E.

State Medicine and Pharmacy University Nicolae Testemitanu, Republic of Moldova

e-mail: evelina.lesnic@usmf.md

CZU:616.24-002.5-08

<https://doi.org/10.52757/imb22.64>

Telemedicine for providing support of high-risk groups is now gaining-momentum worldwide. In this context, the European Commission elaborated the strategic approach requiring a long-term program for implementation of telemedicine. As a result, the Republic of Moldova (RM) did the first step for implementing the video-observed treatment (VOT) in the therapeutic management of tuberculosis (TB) patients. VOT is based on the principle when the staff involved in its performing can observe the administration of the antituberculous drugs using electronic devices (personal computer, notebook, smartphone with Android system) through a web camera. Patient can be treated by VOT if has an available electronic device, a web camera, broadband Internet is residing in the RM and can administrate independently the treatment. . Excluding criteria from VOT were deep social economic vulnerability, migration, homelessness, detention, mental disorders and harmful habits associated with psychic impairment, as well as severe comorbid condition.

The aim was to assess the efficacy and safety of the video-observed treatment (VOT) in patients with pulmonary TB.

A prospective case-control study included 114 patients with PTB treated with VOT, distributed in the group 1 (G1) - 26 cases treated in both therapeutic phases using the VOT and the group 2 (G2) - 88 cases treated by VOT only in the continuation phase in the period 2019-2022 in Chisinau was conducted.

Distribution according to sex: men/women rate was 1,4 in G1 vs 2,7 in G2, and the majority of patients from both groups were between 18 and 44 years 15 (58%) vs 61 (69%) cases, respectively. New cases were 24 (92,3%) vs 83 (94,3%) and previously treated for TB were 2 (7,6%) vs 5 (5,7%) patients, respectively. By the family doctors as symptomatic patients were detected 3 (11,5%) vs 14 (15,9%) and as high-risk groups 6 (23,1%) vs 7 (7,9%) cases, directly addressed to the institution offering the VOT were 7 (30,1%) vs 17 (19,3%). Positive results of the sputum smear for AFB were 4 (15,4%) vs 34 (38,6%), $p < 0,01$ and culture positive were 5 (19,2%) vs 44 (60,1%) ($p < 0,001$), GeneXpert MTB positive results were obtained in 5 (19,2%) vs 50 (56,8%), ($p < 0,001$), and resistant to rifampicin were 2 (7,6%) vs 19 (21,6%), ($p < 0,001$) respectively in both groups. All patients were diagnosed with pulmonary infiltrative TB, however bilateral involvement was determined in 5 (19,2%) vs 30 (34,1%) and lung destruction in 3 (11,5%) vs 15 (17,1%) cases respectively. Therapeutic success was established in 24 (92%) vs 78 (89%) cases, died 1 (2%) patient as result of the comorbid state and 1 (1,3%) continued the treatment in G1 vs 10 (11%) in G2. Adverse drug reactions were minor, managed remotely and included only gastrointestinal disorders in 3 (11,3%) vs 2 (2,3%).

Conclusions: The VOT in patients with pulmonary TB, showed a high efficacy and safety, regardless the treatment phase during which was implemented. Disease related characteristics, such as case-type, clinical form and severity, positive microbiological state and multi-drug resistance did not show an evident impact on the outcome, as a consequence of excluding criteria. Even the rate of adverse drug events was low, one death was registered and was determined by other cause than the progression of tuberculosis. VOT can be implemented in the management of TB patients in actual epidemiological state of the Republic of Moldova, if a complex of supporting measures will be offered to the patients, as an electronic device with a web camera, broadband Internet and financial support during the treatment.