

Abstract

OBJECTIVE: To measure delay in the diagnosis and treatment of bacteriological confirmed tuberculosis (total delay) and to determine factors associated with delays in seeking health care (patient delay) and in diagnosing tuberculosis and commencing antituberculosis treatment (health care system delay).

DESIGN: This is a prospective case enrollment and patient interviews study. The catchment areas are Tainan City, Tainan County, and 13 townships of Kaohsiung County in Taiwan. Bacteriological confirmed newly-diagnosed tuberculosis cases during January 01 and May 05, 2003, were included in this study. Patients with a history of tuberculosis, which was defined as previous experience of treatment with antituberculosis drugs for more than one month, are excluded. During the study period, all reported tuberculosis in the catchment area were obtained from the Center for Disease Control, Taiwan. A research assistant contacted eligible patients and arranged schedule and place of interview. A pilot tested questionnaire was used for interview and data collection. Two well-trained interviewers carry out the interviews. Patients are asked to recall the duration of symptoms before medical consultation and the experience of medical consultations. Patient delay is defined as the interval from the onset of symptoms to the first medical consultation. Health care system delay is defined as the interval from first medical consultation to the initiation of antituberculosis treatment. Total delay was defined as the interval from the onset of symptoms to the initiation of antituberculosis treatment.

RESULTS: From January 01 through May 05, 2003, there were 281 newly-diagnosed sputum positive pulmonary tuberculosis patients reported in the catchment area. Among 281 patients, we successfully interviewed 206 (73.3%) patients. There were 143 (69.4%) men and the mean age of the study population was 59.2 (range, 17-91) years old. Among the 206 patients, 138(67.0%) were sputum smear positive, 193 (93.7%) are symptomatic, 77.2% had cough. Median patient delay was 7 days (inter-quartile range, 1-28 days). Median health care system delay was 23 天(inter-quartile range, 5-51days). Median total delay was 44 days (inter-quartile range, 18-92 days) . Long patient delay was associated with age (younger than 65 year-old) and having cough, long health care system delay were associated with female、no hemoptysis and clinics as the entry point to the health care system. 77.2% of patients visited health care system within 4 weeks of onset of symptoms. 55.3% of patients had been diagnosed with tuberculosis within 4 weeks of medical consultations. 31% of patients started antituberculosis treatment within 4 weeks of onset of symptoms while 60.2% of patients did so within 8 weeks of onset of symptoms.

CONCLUSION: Health care system delay was the major delay in the diagnosis and treatment of tuberculosis. Health care system should strength the capacity of sputum smear examination. Physicians should maintain high alert for patients presented with symptoms compatible with tuberculosis and have prompt sputum examinations to diagnose tuberculosis properly and efficiently.

Keywords : tuberculosis ; patient delay ; health care system delay ; total delay