

中文題目：肺結核病患接受抗結核藥物治療後早期痰液陰轉的預測因子

英文題目：The predictor of early sputum conversion in patient with pulmonary tuberculosis after anti-mycobacterium tuberculosis treatment

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Background:

Pulmonary tuberculosis (TB) is air-borne disease (airborne particles 1 to 5 microns in diameter) that needs isolation while hospitalization. According to Centers for Diseases Control and Prevention in Taiwan, the patient with pulmonary TB can be de-isolation after anti-mycobacterium tuberculosis treatment for two weeks. In our best knowledge, there was less studies that evaluate the predictor of early sputum conversion in pulmonary TB which was defined sputum conversion in two weeks. The objective of this study was to assess the predictors of the predictor of early sputum conversion after anti-TB treatment two weeks.

Method

The retrospective observational study including the patients with pulmonary TB who were treated with standard anti-TB medications and the sputum culture data of mycobacterium tuberculosis was available. The clinical characteristic, underling diseases, chest radiograph, and sputum conversion in early two weeks were analyzed. The outcome predictors of early sputum conversion were determined by multivariate logistic regression model.

Result

From May 2015 to May 2018, a total 62 patients were recruited and 26 patients (42%) had early sputum conversion in two-week anti-TB treatment. There was no difference between early conversion group and non-conversion group in baseline characteristics, including chronic obstructive pulmonary disease (7 vs. 5, p value: 0.733), diabetes mellitus (10 vs. 10, p value: 0.418), hypertension, (7 vs. 12, p value: 0.780), chronic kidney disease, (6 vs. 3, p value: 0.147), cancer, (4 vs.6, p value: 1.000), and cavity in chest radiograph, (3 vs. 8, p value: 0.331).

Comparing the early sputum conversion group and non-conversion group, the age (73.5 VS 59.5, P value: 0.0025) was significantly higher and C-reactive protein (CRP) (3.28 VS 6.6, P value: 0.048) was significantly lower. In multivariate analysis, there was significantly lower CRP (odds ratio: 0.78, P value: 0.023) in early conversion

group. In contrast, there was no significant difference in cavity lesion of lung and result of acid-fast stain load.

Conclusion:

The proportion of early sputum conversion was 42% after standard anti-mycobacterium tuberculosis treatment for two weeks. The rule of de-isolation for patient with pulmonary TB after standard treatment may need further study. Lower CRP may accelerates early sputum conversion.