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PREVENTIVE HEALTH IN A CHANGING WORLD

RISK FACTORS FOR LATE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS IN SINGAPORE

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Background

Since the mid-2000s, the incidence rates of tuberculosis (TB) in Singapore have plateaued around 40 per 100,000 population. Transmission of TB due to delayed presentation, diagnosis and treatment may be a contributory factor. In this study, we aim to determine if there is late presentation, diagnosis and treatment of TB in Singapore, and to identify risk factors leading to this.

Methods

A retrospective cohort study was performed on all Singapore Tuberculosis Elimination Programme (STEP) Registry notifications from 2014 to 2018. Late diagnosis was defined as duration of cough ≥ 12 weeks at notification. Data was not available to determine if late presentation led to late diagnosis. Treatment delay was defined as the interval between date of notification and date of starting treatment. Univariate analysis was conducted using chi-squared and Mann-Whitney U tests, and multivariate analysis using logistic regression.

Results

5891 patients were included in the study. The median duration of cough at notification was 4 weeks (IQR: 2-12 weeks), and 1612 (27.4%) were diagnosed late. On multivariate analysis, late diagnosis of TB was associated with Chinese ethnicity, being married and diagnosis through symptoms. The median treatment delay was 0 days (IQR: 0-0 days). 68% of patients started treatment on the day of notification and 91% started treatment within 1 week of notification. Most of the cases who were not started on treatment at notification had left the country.

Conclusion

A substantial number of TB cases in Singapore were diagnosed late, while treatment of TB upon diagnosis was timely. The reasons for late diagnosis, which could include late presentation, should be the subject of further study.