Post-tuberculosis lung function among adults screened for chronic obstructed pulmonary disease in Nepal, Peru and Uganda: a post-hoc analysis of the GECO study

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Type selection

Category: Scientific research

Preferred presentation type: Oral abstract presentation

Track selection

Track: Track B: LUNG HEALTH (pneumonia, asthma, COPD, other respiratory diseases in adults and children)

2nd Track: Track K8: Health and well-being post TB

Scientific Research Abstract Text

Background: Prior tuberculosis is an important risk factor for chronic airflow obstruction. Whether individuals have lung function impairment prior-to or after tuberculosis and associated risk factors remain unclear. In a post-hoc analysis of the Global Excellence in COPD Outcomes (GECo) study of COPD case-finding in Nepal, Peru, and Uganda, we examined the association between previous TB and chronic respiratory disease (CRD) as well as the relative timing of lung function impairment and tuberculosis.

Design/Methods: Participants were screened for COPD using questionnaires followed by post-bronchodilator spirometry. COPD was defined as FEV_1 to FVC ratio less than the fifth percentile of the GLI mixed-ethnic population reference lower limit of normal. Data on self-reported long-term conditions and time since diagnosis were collected. We used logit regression models to compare the odds of COPD in those with previous treated tuberculosis versus those without.

Results: Among 10,648 study participants, the prevalence of previous tuberculosis was 4%(n=430); COPD was 9%(n=993) and CRD 5%(n=534). Median age at tuberculosis diagnosis was 32 (IQR 23-45) years. Among those with previous TB, 12% (53/430) had been diagnosed with CRD. Of those with TB and CRD, 25%(13/53) were diagnosed with CRD before TB, and 75%(40/53) with TB before developing CRD. Median time to CRD diagnosis after TB was 20 years (IQR: 8-27). After adjusting for age, sex, time since diagnosis with TB, and smoking status, individuals with previous tuberculosis had a 2.45 (95% CI: 1.89-3.19) times greater odds of COPD compared to those without. Respiratory lung function and symptoms were associated with COPD among those with previous TB.

Conclusions: Prior TB diagnosis is a significant predictor of COPD among this diverse Global South population. Further analyses of risk factors and other long-term conditions will provide valuable insights.

Summary

Summary: In this analysis we describe lung function changes post tuberculosis disease from three Global South countries, Nepal, Peru and Uganda. We furthermore investigate differences in lung function between those with a history of tuberculosis and without in an age- and time adjusted analysis.

Other Fields

Country of research: Nepal, Peru, Uganda

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