vaccinated at birth. The mean size of TST indurations observed was 7±4 mm. Of the sample, 12 (2%) cases had a positive TST. Association between observed factors are explained in Table 1. Bacille Calmette-Guérin (BCG) showed statistically significance association with LTBI.
Conclusion: Prevalence of LTBI among healthy young adults of Karachi is significantly less at 2%. BCG was the only associated factor identified. Medical students are at twice the risk of acquiring the disease compared to their non medical contemporaries.

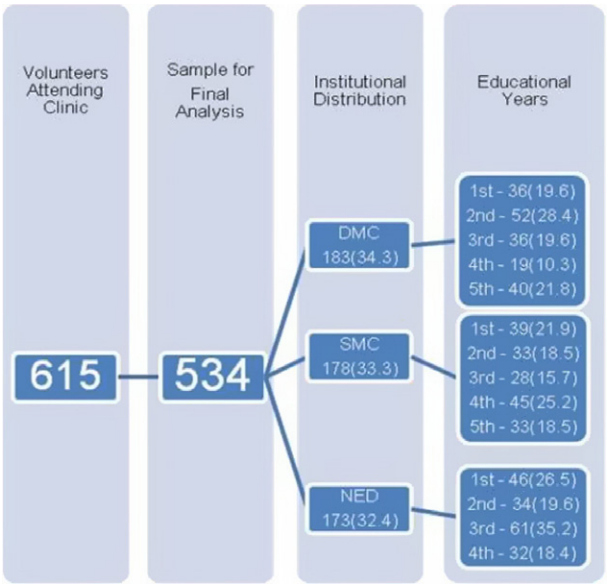

Figure 1. Flow chart of study participants.

Table 1. Association of observed factors to latent tuberculosis disease status among healthy young adults

Factors	Positive TST, n (%)	Negative TST, n (%)	Uncertainty coefficient (P-value)	Contingency coefficient (P-value)
Gender				
Male	2 (0.3)	202 (37.8)	0.007	0.067
Female	10 (1.8)	320 (59.9)	(0.09)	(0.12)
Institute				
Medical	8 (1.4)	353 (66.1)	0.0001	0.003
Non medical	4 (0.7)	169 (31.6)	(0.94)	(0.94)
Ethnicity				
Urdu speakers	9 (1.6)	352 (65.9)	0.001	0.024
Non-Urdu speakers	3 (0.5)	170 (31.8)	(0.57)	(0.58)
Own recent history				
None	5 (0.9)	274 (51.3)	0.001	0.032
Possible	7 (1.3)	248 (46.4)	(0.45)	(0.45)
Own chronic exposure				
None	4 (0.7)	295 (55.2)	0.006	0.069
Possible	8 (1.4)	227 (42.5)	(0.11)	(0.11)
BCG vaccinated				
Yes	10 (1.8)	519 (97.1)	0.104	0.240
No	2 (0.3)	3 (0.5)	(0.00)*	(0.0001)*

BCG, Bacille Calmette-Guérin; TST, Tuberculin skin test.
*Significant.

PP-210 Utility of B cell epitopes based on peptides of RD1 and RD2 mycobacterial antigens for immunodiagnosis of pulmonary tuberculosis

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Background: Serodiagnostic tests incorporating highly specific RD antigens from *Mycobacterium tuberculosis* have recently been shown to be promising assays for accurate diagnosis of both pulmonary and extrapulmonary tuberculosis (TB). However only few of these studies have used synthetic peptides and none has used them to differentiate TB from Sarcoidosis, a close mimic of smear negative pulmonary TB (PTB) with entirely different clinical management.
Methods: Bioinformatics has emerged as a powerful tool to predict amino acid sequence of immunodominant B cell epitopes. In this study, Bcepred program was used to predict B cell epitopes of immunodominant RD1 (ESAT6, CFP10) and RD2 (CFP21, MPT64) antigens. Peptide corresponding to these epitopes were got commercially synthesised and ELISA was used as diagnostic technique to evaluate the reactivity of these four peptides individually and in combination with the sera of sputum smear +ve and sputum smear –ve PTB patients, Sarcoidosis patients and healthy controls taking the mean + 3 SD of OD of entire healthy control group as cut-off.
Results: Sensitivity with individual peptides ranged from 37.5%-83% for smear +ve, 25–58% for smear –ve as compared to 4–16% in sarcoidosis (a close mimic of PTB). However, combination of all the four peptides resulted in 80% sensitivity for smear +ve, 58.3% smear –ve and only 4% in sarcoidosis patients. In all these assays, specificity was always observed to be 100% suggesting the highly specific nature of RD peptides used in present study.
Conclusion: Thus, synthetic peptides corresponding to Bcell epitopes of mycobacterial RD antigens can be used for devising highly sensitive and specific TB diagnostic test which can not only result in rapid diagnosis of smear positive PTB but also detect a good proportion of otherwise difficult to diagnose sputum smear –ve pulmonary TB with an ability to differentiate from Sarcoidosis.

PP-211 Evaluation of latent *Mycobacterium tuberculosis* infection screening using TSPOT®.TB assay and TST in IMID patients prior to initiation of anti-TNF alpha therapy

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Objective: To evaluate interferon gamma release assay (TSPOT®.TB assay) and tuberculin skin test (TST) for detecting latent tuberculosis infection (LTBI) among patients with immune mediated inflammatory diseases (IMID) prior to initiation of anti-TNF alpha therapy in BCG-vaccinated area.
Methods: 294 IMID patients and 48 healthy controls from Eastern China were enrolled. The TSPOT®.TB assay and TST were performed on all subjects simultaneously. The positive rates and odds ratio of risk factors were analyzed among different subgroups.
Results: The positive rate of TSPOT assay was 27.2% and that of TST was 51.4% (cut-off $\geqslant$5 mm) or 38.4% (cut-off $\geqslant$10 mm) among IMID patients. Either in IMID patients or in healthy controls, the TST positive rates were both significantly higher than that of TSPOT assay ($P < 0.005$). TST positive rate in IMID patients was lower than in healthy control. IMID patients are more likely to be misdiagnosed as LTBI by TST. Among IMID patients, TST result was apparently associated with BCG vaccination and immunosuppressive therapy ($P < 0.05$) while TSPOT result was not.
Conclusion: TSPOT assay is a more reliable and sensitive tool for screening LTBI among IMID patients in BCG-vaccinated area, especially for those on immunosuppressive therapy.