The aims of this study are to identify the predominant risk factors of LTBI in close contacts with active TB patients and to compare the efficacy of the tuberculin skin test (TST) and QuantiFERON®-TB GOLD (QFT-G) to diagnose LTBI.
Mehtods: Close contacts of active pulmonary TB patients visiting a hospital in South Korea were diagnosed for LTBI using TST and/or QFT-G. The association of positive TST and/or QFT-G with the following factors was estimated: age, gender, history of Bacillius Calmette-Guerin (BCG) vaccination, history of pulmonary TB, cohabitation status, the acid-fast bacilli smear status, and presence of cough in source cases.
Results: Of 308 subjects, 38.0% (164/305) were TST positive and 28.6% (59/206) were QFT-G positive. TST positivity was significantly associated with male gender (OR: 1.734; 95% CI: 1.001-3.003, p = 0.049), history of pulmonary TB (OR: 4.130; 95% CI: 1.441-11.835, p = 0.008) and household contact (OR: 2.130; 95% CI: 1.198-3.786, p = 0.01) after adjustment for confounding variables. The degree of concordance between TST and QFT-G was fair (70.4%, κ = 0.392).
Conclusion: A prevalence of LTBI among close contacts of active pulmonary TB patients was high, and prior TB history and being a household contact were risk factors of LTBI in the study population.

P2845

Quantiferon-TB Gold in tube assay for detecting latent TB infection in immigrants and TB contacts

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Recently, interferon-gamma release assay are used to discriminate potential infection and prior vaccination with BCG. The aim of this study was to compare the level of agreement between TST and Quantiferon-TB Gold in tube assay (QFT) in exposed contacts of active tuberculosis in a French area with TB low incidence and in immigrants from countries of high incidence. A total of 837 adults (mean age, 36 years) exposed to LTBI by recent contact or recent migrants were enrolled. TST was considered positive with a cut-off of 10mm and QFT test was positive for a cut-off 0.35 IU/ml. In all population (n=837), 413 subjects (49%) had a positive TST result and 251(30%) had a positive QFT result with a kappa concordance test: 0,32. In recent migrants from North or sub-Saharan Africa or ex-USSR (n=451), 137 (43%) participants had a positive TST and 194 (39%) had positive QFT result, with Kappa concordance test of 0,56. In recent TB contact participants, 195 (58%) had a positive TST and 64 (19%) had a positive QFT result with a Kappa concordance test of 0.08. Overall agreement between the TST and QFT was significant only in immigrants from area with high prevalence of TB. In TB contact subjects, the low concordance is explained by prior BCG vaccination in French population. Our study is limited to one-centre recruitment but it is pertinent to compare subjects from low to high incidence area of TB. Published studies are confirmed the advantage of interferon-gamma release assays over the TST to detect latent TB infection. Nevertheless, prior BCG vaccination and patient origin from low or high prevalence countries could be specified.

P2846

Safety of two step tuberculin skin test (TST) in the screening of healthcare workers for latent TB infection (LTBI)

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Background:
Health care workers and trainees have a high risk of exposure to TB infection. To estimate the prevalence LTBI and active TB, we recruited nursing trainees. We report the safety of TST, in this cohort.
Methods:
Consenting Nursing students(739 subjects), from the Christian Medical college were screened annually for 5 years (2007-11), for active TB and LTBI. Two-step TST was performed using PPD (2 TU, RT23, Positive cut off- 10 mm). For the first 4 years, the subjects were educated about the likely minor adverse events, but asked to report any events that bothered them (Cohort A; 594 subjects). During the last year (2011), an investigator ran a check list of likely adverse events (Cohort B; 145 subjects).

Baseline Characteristics		
Characteristics	Cohort-A (N=594)	Cohort-B (N=145)
Age (mean)	22 yrs	20.5 yrs
Female	93.7%	93 %
Male	6.3 %	7 %
BCG vaccination Status		
Not vaccinated	5.5 %	2.1 %
Vaccinated at birth	73.5 %	96.9 %
Vaccinated after birth	4.3 %	1 %
Unknown	16.7 %	0 %
Course of study		
Diploma	42.2%	64.8%
B.Sc	34.2%	35.2%
M.Sc/Fellowships	23.6%	0%

Results & Conclusions:
The LTBI in the study population was high 353/739(47.7%). The bothersome adverse events as reported by Cohort A were extremely low 1.3%. However the actual incidence of adverse events as reported by Cohort B was 19.3%.

Adverse Events			
Cohort A- Subject reported(N= 594)		Cohort B-Investigator elicited (N= 145)	
Nil	98.7 %	Nil	80.7 %
Blistering	0.3 %	Itching	0.7 %
Fever	0.1 %	Mild pain & Itching	15.9 %
Fever & Body ache	0.1 %	Moderate pain & Itching	2.1 %
Others	0.8 %	Moderate pain, Itching & Fever	0.7 %

Screening for LTBI using TST is simple, cost effective and safe, and should become standard practice.

P2847

Significance of contacts in the manifestation of tuberculosis as an infectious disease

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The purpose of this study was to evaluate the importance of contact in the manifestation of tuberculosis, ie what age, which forms manifest tuberculosis and what is the time period from contact to manifestation of tuberculosis.
For this purpose, the histories of 88 cases of tuberculosis in persons who have been in contact with tuberculosis, for the period 2010-2012.
The contact was comfirmed at 7.5% of analyzed TB patients.
47.7% were male and 52.3% were female. 28.4% belonged to the age group of 0-14 years, 54.5% of the age group 16-44 years and 17% were older than 44 years.
92% were with pulmonary, and 8% with extrapulmonary tuberculosis.
M. tuberculosis from sputum was isolated at 44.9%.
The source of infection in a close family member was in 76%. In 12% source was another member of the family (grandmother, grandfather, aunt). In 12% source was a roommate from the prisoner's room, or classmate or neighbor.
In 75%, the source of infection in the family was one of the parents, in 15.6% was brother or siste, and at 9.4 % was one of the spouses.
Analyzing the time period for manifestation of tuberculosis after the contact, in 56.7% tuberculosis is diagnosed to 3 months after the contact, in 23.3% in a period of 3 to 6 months, and after 6 months tuberculosis manifested in 20% of the respondents.
Conclusion: Contact was confirmed at 7.5% of analysed TB patients. In 76% of the cases source was in the family, and the most common source was one of the parents (75.6%). After the contact tuberculosis usually manifests in the first three months (56.7%). Because the tuberculosis can manifest even after 6 months of contact, there is a need for contact tracing in an extended period of time.

P2848

Nationwide school-based tuberculin survey with effect of BCG vaccination

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Backgrounds: Nationwide tuberculin survey to the 1st (E1), 6th graders (E6) of the elementary schools and 1st graders (H1) of the senior high schools in 2012.
Objectives: To identify the effect of mass BCG vaccination on school-based tuberculin survey.
Method: Tuberculin survey was conducted to three school graders selected by a population-based proportional allocation using stratified random sampling. A total of 28,724 students were tuberculin tested with 2 TU PPD RT23 with