INCIDENCE OF TUBERCULOSIS INFECTION IN CHILDREN TRAVELLING TO COUNTRIES WITH HIGH PREVALENCE OF TUBERCULOSIS (PRELIMINARY RESULTS).

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Background:

- Children residing in low-incidence countries of tuberculosis (TB) travelling abroad to endemic TB regions for visiting friends and relatives (VFR) are at risk of latent TB infection (LTBI).
- The identification of risk factors associated with TB infection would allow us to improve screening programmes pre-post travel.
- The aim of this study was to determine the incidence and risk factors associated with LTBI in VFR children travelling to countries with high-incidence of TB.

Methods:

- A multicentric prospective cohort study is being developed since 2017, including different health-care levels, of a cohort of VFR children <15-year-old travelling to high-incidence TB countries of >50 cases/10⁵ inhabitants.
- Children were screened before travelling with a tuberculin skin test (TST), LTBI was defined as a TST conversion and/or a positive QuantiFERON-TB-Plus®(QFT) performed after the trip.
- Statistical analysis was carried out through Stata®v13.
- Ethical approval was obtained from all the participating centres.

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Results:

- Two-hundred sixty-four children were recruited, 252 analysed (12 not TST-screened).
- Median [IQR] age was 5.83[2.84-9.02] years; 50.8% female; **86.7% autochthonous**; 4.8% BCG-vaccinated;
- Travel destinations:** 41.3%(104/252) travelled to Africa, 36.9%(93/252) to Asia, 20.6%(52/252) to America/Caribbean, and 1.2%(3/252) to Eastern Europe (figure 1)

Figure 1. Most important travel destinations of the recruited children

- Median [IQR] travel duration was 1.3 [1.0-1.8] months.
- TST was performed at a median [IQR] of 16 [7-22] days before departure's date.
- Pre-travel TST results:** 4/252 (1.6%;95%CI:0.6-4.2%) were TST positive: **3/252(1.2%;95%CI:0.4-3.6%) LTBI**, and 1/252(0.4%) because of BCG vaccination.
- Post-travel TST results:** among 187 children, **TST and/or QFT were performed in 74.9% (95%CI:68.1-80.6%) of them** at a median [IQR] of 74 [53-95] days, and **no LTBI have been detected due to travel itself**.
- TST was performed at a median [IQR] of 74 [55-95] days after returning travel date.
- Median [IQR] household familiar cohabitants during the stay at travel destination was of 7 [6-9.75] individuals.
- Most of the children (57.4%) travelled to urban areas, and nearly 20% lived there with adult active smokers.
- Known TB contact during the travel was reported by 2.0% of the subjects.

Conclusions:

- No LTBI cases have been detected after travelling in these preliminary results.
- However, **3 children with LTBI (1.2%;95%CI:0.4-3.6%) were diagnosed due to the study itself before the trip**.
- VFR children could be a high-risk group for LTBI susceptible to be screened.