Tuberculosis still remains one of the deadliest infectious diseases in the world. In 2004 the World Health Organization estimated that 8.9 million new cases occurred of which 884,000 were in children (10.7%). However, the diagnosis of childhood pulmonary tuberculosis presents a challenge because bacteriological confirmation is difficult. Worldwide, the majority of paediatric cases are diagnose using a combination of criteria; the Mantoux tuberculin test is one of the important among them despite at least 3 problems for its interpretation:

- The effect of prior BCG vaccination.
- Variability in the performance and/or the reading of the resultant reaction.
- The cut-off size for a positive reaction.

Recently alternative methods based on interferon-gamma measurement were proposed. They are very promising but require further investigations and are not suitable for low income countries.

Objective: we evaluated the limits and the interest of the tuberculin skin test which is currently, the only method we use to detect a tuberculosis infection.

Study: A prospective study was conducted in a district control tuberculosis center from Setif (Algeria). During one year, children less than 15 years presenting to the control tuberculosis center and suspected of having respiratory tuberculosis symptoms (50) or children screened for close contact (242) were investigated. Tuberculosis was diagnosed in 36 of them. After two years of follow up of the remaining 256 children, 11 were considered to have tuberculosis and 245 not to have TB. The comparison between the groups of treated (47) and untreated (245) for tuberculosis allows discussing the diagnostic criteria, and, among them, the tuberculin skin test.

Results:

Among patients with TB, the tuberculin reaction average is 13.5 mm ± 0.94. There is no correlation between the size of the IDR and the vaccine statute (documented in the vaccination notebook) nor with the screening for close contact (7.14± 0.30 vs 8.88 ± 0.86); the size average of the skin test is not significantly different between the tuberculous patients less than 5 years old and those of more than 5 years. A positive skin test ≥ 10 mm is more frequent the eutrophic children than in those with a loss of weight (p< 0.01).

Among no TB patients, the tuberculin reaction average is 6.82 mm ± 0.48

We also analyzed the sensitivity and the specificity and the predictive values of different cut points:

- For a cut point of 6mm: Sensitivity 83%, Specificity 31%, VPP 41%, VPN 77%,
- For a cut point of 10mm: Sensitivity 74%, Specificity 74%, VPP 62%, VPN 83%,
- For a cut point of 15mm: Sensitivity 52%, Specificity 90%VPP 76%, VPN 77%.

The tuberculin skin testing is one of the criteria which appeared most relevant for the diagnosis of tuberculosis in children but the problem of adapted cut point for our country remains.