

# **Hubungan status jaringan parut BCG dengan kejadian tuberkulosis ekstraparau pada pasien anak Rumah Sakit Cipto Mangunkusumo periode 2015-2017 = Relation between BCG scar status and extra pulmonary tuberculosis incidence in children with tb managed in Rumah Sakit Cipto Mangunkusumo during 2015-2017**

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## **Abstrak**

Latar belakang. Meskipun vaksin Bacille Calmette-Guerin telah menjadi program vaksinasi wajib di Indonesia, TB pada anak tetap prevalen sehingga penelitian ini akan mengevaluasi jaringan parut BCG dan hubungannya dengan kejadian TB ekstraparau (TB-EP) pada anak.

**Metode Penelitian.** Pengambilan data dilakukan di Rumah Sakit Cipto Mangunkusumo Kiara dengan metode potong-lintang pada populasi anak terdiagnosis TB berdasarkan kriteria WHO dan konsensus IDAI. Hasil. Sebanyak 246 pasien anak dengan jangkauan usia 2 bulan -18 tahun terdiagnosis TB. Sebesar 127 anak (51,6%) mengalami TB-EP, dengan prevalensi TB tulang, KGB dan abdomen secara berurutan 13%, 10,9%, dan 6,6%. Mayoritas pasien TB EP adalah laki-laki (55,2%) dan berada dalam kelompok usia 6-14 tahun (60%). Riwayat kontak dengan kasus TB-EP ditemukan pada 49 kasus (51,5%). Penyakit komorbid penyerta dengan mayoritas keganasan (25,6%) dan infeksi HIV (23,1%) ditemukan pada 21 kasus TB-EP (35%). Status jaringan parut BCG positif ditemukan pada 140 kasus (56,9%). Dari 106 anak tanpa jaringan parut BCG, sebanyak 38 anak (35,8%) memiliki TB paru dan sebanyak 68 anak (64,2 %) memiliki TB-EP. Tidak adanya jaringan parut BCG memiliki hubungan yang bermakna dengan kejadian TB-EP pada anak ( $p < 0.01$ ) dengan OR: 2,457 (IK95% : 1,46 - 4,131).

**Kesimpulan.** Tingginya kejadian TB-EP pada anak pada proporsi tanpa jaringan parut BCG berhubungan signifikan secara statistik. Upaya vaksinasi BCG yang optimal diperlukan untuk mengurangi morbiditas dan mortalitas TB-EP pada anak di Indonesia.

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**Objectives.** Although the Bacille Calmette-Guerin vaccination program is already implemented nationally, childhood TB remains prevalent particularly in Indonesia so this study will evaluate the relationship between BCG vaccination scar and extra pulmonary TB in children.

**Methods.** Data collection was conducted at Cipto Mangunkusumo Kiara Hospital by cross-sectional method. Children diagnosed with TB according to WHO criteria and IDAI consensus are included in this study.

**Results.** A total of 246 pediatric patients with a-2 months to 18 years-age range were diagnosed with TB. Extra pulmonary TB was found in 127 children (51.6%), with the most prevalent type: bone, lymph node and abdomen TB sequentially are 13%, 10.9%, and 6.6%. The majority of patients with extrapulmonary TB are male (55.2%) and are in the age group 6-14 years (60%). History of contact with active TB cases was found in 49 out of 95 extrapulmonary cases (51.5%). Comorbidities, predominantly malignancies (25.6%) and HIV infection (23.1%), were found in 21 of 60 extrapulmonary cases (35%). BCG scar was found in 140 cases (56.9%). Of 140 children with BCG scar, 81 children (68.1%) had pulmonary TB and 59 children (42.1%) had extra-pulmonary TB. Of the 106 children without BCG scar, 38 (35.8%) had pulmonary TB and 68 (64.2%) had extra-pulmonary TB. The absence of BCG scar tissue has a significant relationship with

extra-pulmonary TB incidence in children ( $p <0.01$ ) with OR :2.457 (CI95% : 1.46 - 4.131).

Conclusion: The high incidence of extra-pulmonary TB in children in the proportion lacking BCG scar was statistically significant. Thus, an optimal BCG vaccination effort is required to reduce the morbidity and mortality of childhood extrapulmonary TB in Indonesia.