

ABSTRAK

Judul : Gambaran Radiologi Toraks Pada Pasien TB Paru Atipikal Dengan Diabetes Melitus Tipe 2 Berdasarkan Status Kontrol Glikemik Dan Indeks Massa Tubuh Di Rsu Royal Prima

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Pendahuluan: Akibat terganggunya respons imunologis yang disebabkan oleh hiperglikemia, diabetes melitus tipe 2 (DM) mengganggu manifestasi radiologis dan meningkatkan risiko tuberkulosis paru (TB). Pasien dengan diabetes tipe 2 yang menderita TB paru atipikal sering menunjukkan keterlibatan zona bawah/lobus bawah dan lesi yang lebih luas pada radiografi dada. Meskipun saat ini masih sedikit bukti di Indonesia, diyakini bahwa indeks massa tubuh (BMI) memengaruhi gambaran radiologis selain kontrol glikemik. Studi ini meneliti gambaran radiografi dada pada pasien dengan tuberkulosis paru atipikal dan diabetes tipe 2 di Rumah Sakit Umum Royal Prima Medan berdasarkan indeks massa tubuh dan status kontrol glikemik mereka. Metode Penelitian: Studi observasional analitik dengan desain retrospektif cross-sectional ini menganalisis rekam medis 120 pasien tuberkulosis paru atipikal dengan diabetes tipe 2 yang menerima perawatan di Rumah Sakit Umum Royal Prima Medan antara Januari 2024 dan Desember 2025. Sampel dipilih menggunakan strategi pengambilan sampel komprehensif. Untuk analisis data univariat dan bivariat, digunakan Uji Eksak Fisher, uji Chi-square, dan uji t Sampel Independen, dengan tingkat signifikansi $p < 0,05$. Hasil: Sebagian besar pasien memiliki kontrol glikemik yang tidak terkontrol (58,3%), keterlibatan zona bawah/lobus bawah (51,7%), dan lesi multilobar (61,7%). Tingkat kontrol glikemik secara substansial terkait dengan ukuran lesi paru ($p < 0,001$) dan keterlibatan zona bawah/lobus bawah ($p < 0,001$). Selanjutnya, terdapat korelasi signifikan antara kategori BMI dan ukuran lesi paru ($p = 0,002$) dan keterlibatan zona bawah/lobus bawah ($p = 0,010$). Usia dan jenis kelamin tidak berkorelasi signifikan dengan hasil radiologis ($p > 0,05$). Kesimpulan: Gambaran radiografi dada berhubungan dengan kategori BMI dan tingkat kontrol glukosa pada pasien TB paru atipikal dengan diabetes tipe 2, tetapi tidak dengan usia atau jenis kelamin.

Kata kunci: *TB paru atipikal, diabetes melitus tipe 2, radiologi toraks, kontrol glikemik, indeks massa tubuh.*

ABSTRACT

Title : *Thoracic Radiology Images In Atypical Pulmonary TB Patients With Type 2 Diabetes Mellitus Based On Glycemic Control Status And Body Mass Index At Royal Prima Hospital*

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Background: Due to compromised immunological responses brought on by hyperglycemia, type 2 diabetes mellitus (DM) impairs radiological manifestations and increases the risk of pulmonary tuberculosis (TB). Patients with type 2 diabetes who have atypical pulmonary TB often show lower zone/lower lobe involvement and more extensive lesions on chest radiography. Although there is currently little evidence in Indonesia, it is believed that body mass index (BMI) influences radiological features in addition to glycemic control. This study looked at the radiographic features of the chest in patients with atypical pulmonary tuberculosis and type 2 diabetes at Royal Prima Medan General Hospital based on their body mass index and glycemic control status. **Research Methods:** This observational analytical study with a retrospective cross-sectional design analyzed the medical records of 120 atypical pulmonary tuberculosis patients with type 2 diabetes who received treatment at Royal Prima Medan General Hospital between January 2024 and December 2025. The sample was selected using a comprehensive sampling strategy. For both univariate and bivariate data analysis, Fisher's Exact Test, Chi-square test, and Independent Samples t-test were employed, with a significance level of $p < 0.05$. **Results:** Most patients had uncontrolled glycemic control (58.3%), lower zone/lower lobe involvement (51.7%), and multilobar lesions (61.7%). Glycemic control level was substantially associated with lung lesion size ($p < 0.001$) and lower zone/lower lobe involvement ($p < 0.001$). Furthermore, there was a significant correlation between BMI category and lung lesion size ($p = 0.002$) and lower zone/lower lobe involvement ($p = 0.010$). Age and gender did not significantly correlate with either radiological result ($p > 0.05$). **Conclusion:** Chest radiographic features were associated with BMI category and glucose control level in atypical pulmonary TB patients with type 2 diabetes, but not with age or gender.

Keywords: atypical pulmonary tuberculosis, type 2 diabetes mellitus, chest radiography, glycemic control, body mass index.