

Insiden dan Faktor Risiko Kejadian Hipotiroid pada Pasien Tuberkulosis Resistan Obat: Studi Kohort Multisenter pada RS Rujukan Tuberkulosis Resistan Obat di Jakarta = Incidence and Risk Factors of Hypothyroidism in Drug-Resistant Tuberculosis Patients: A Multicenter Cohort Study at Drug-Resistant Tuberculosis Referral Hospitals in Jakarta

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Abstrak

Latar belakang: Tuberkulosis resistan obat (TB RO) merupakan salah satu tantangan terbesar dalam upaya pemberantasan TB di dunia, termasuk di Indonesia. Pengobatan TB RO menghadapi sejumlah kendala, termasuk hipotiroid, yang sering kali tidak terdiagnosis walau berpotensi memengaruhi kepatuhan dan hasil pengobatan TB RO, dikarenakan gangguan farmakokinetik obat dan penurunan kualitas hidup. Tujuan: Penelitian ini bertujuan untuk mengetahui insiden kejadian hipotiroid dan faktor risikonya (jenis kelamin, indeks massa tubuh, komorbiditas HIV, jenis OAT dan anti-TPO) pada pasien TB RO di Jakarta. Metode: Penelitian ini merupakan penelitian kohort ambispektif yang dilakukan di empat rumah sakit rujukan TB RO di Jakarta, Indonesia. Data awal diambil dari sistem informasi tuberkulosis nasional dan subjek yang tidak memiliki data TSH awal atau memiliki masalah tiroid pada awal penelitian akan dieksklusi. Subjek yang telah menjalani pengobatan TB RO selama 3 sampai 6 bulan direkrut dan diambil data berupa kuesioner, pemeriksaan fisik dan pengambilan sampel darah vena (TSH dan anti-TPO). Hasil: Sebanyak 148 subjek TB RO diikuti dalam penelitian ini. Hipotiroid ditemukan pada 8 subjek (5,4%). Walaupun kejadian hipotiroid tampaknya lebih sering terjadi pada subjek dengan jenis kelamin wanita (4/56, 7,1% vs 4/92, 4,3%) HIV (1/5, 20% vs 7/143, 4,9%), mendapat OAT kombinasi etionamid/PAS (3/28, 10,7% vs 5/120, 4,2%), dan dengan anti-TPO positif (1/9, 11,1% vs 7/139, 5%), sedangkan lebih jarang terjadi pada subjek dengan malnutrisi (4/83, 4,8% vs 4/65, 6,1%), namun penelitian ini tidak menemukan hubungan yang signifikan secara statistik antara jenis kelamin (RR = 1,6, IK 95% 0,4-6,3), indeks massa tubuh (RR = 0,7, IK 95% 0,2 - 3,0), komorbiditas HIV (RR = 4,1, IK 95% 0,6-27,2), jenis OAT kombinasi etionamid/PAS (RR = 2,6, IK 95% 0,6-10,1), anti-TPO (RR = 2,2, IK 95% 0,3-16,0) dengan kejadian hipotiroid pada TB RO, yang mungkin terkait dengan angka kejadian hipotiroid yang relatif rendah dalam penelitian ini. Kesimpulan: Insiden hipotiroid pada pasien TB RO di Indonesia relatif rendah dibandingkan dengan negara lain. Penelitian yang lebih besar diperlukan untuk menilai faktor risiko yang berkontribusi terhadap kejadian hipotiroid pada pasien TB RO.

.....Background: Drug-resistant tuberculosis (DR-TB) represents one of the most significant challenges to the global effort to eradicate TB, including in Indonesia. The treatment of DR-TB is confronted with a number of significant obstacles, including hypothyroidism, which may frequently be unrecognized and underdiagnosed, despite the fact that it may potentially affect DR-TB treatment adherence and outcomes, due to its impaired drug pharmacokinetics and reduced quality of life. Objective: We aim to assess the incidence of hypothyroidism, and its respective risk factors (Sex, body mass index, HIV comorbidity, DR-TB drug regimen, anti-TPO), in DR-TB patients in health services for DR-TB in Jakarta. Methods: This was an ambispective cohort study conducted in four tuberculosis referral hospitals in Jakarta, Indonesia. Baseline

data was retrieved from the national tuberculosis information system. Participants who had undergone DR-TB treatment for a period of 3 to 6 months were recruited for questionnaire, physical examination and venous blood sampling (TSH and Anti-TPO). Participants with baseline thyroid problems were excluded.

Results: A total of 148 DR-TB subjects were included in this study. Hypothyroidism were found in 8 subjects (5.4%). Interestingly, the incidence of hypothyroidism was more frequent among subjects with female gender (4/56, 7.1% vs. 4/92, 4.3%), those with HIV (1/5, 20% vs 7/143, 4.9%), receiving ethionamide/PAS (3/28, 10.7% vs 5/120, 4.2%) and with positive anti-TPO (1/9, 11.1% vs 7/139, 5%), hereas it was less t frequent in subjects with malnutrition (4/83, 4.8% vs 4/65, 6.1%). Our study observed no statistically significant relationship between sex (RR = 1.6, 95% CI 0.4 - 6.3), body mass index (RR = 0.7, 95% CI 0.2 - 3.0), HIV comorbidity (RR = 4.1, 95% CI 0.6 - 27.2), type of antituberculosis drugs (ethionamide/PAS) (RR = 2.6, 95% CI 0.6 - 10.1), anti-TPO (RR= 2.2, 95% CI 0.3 - 16.0) and hypothyroidism, which might be related to the relatively low incidence of hypothyroidism in our study.

Conclusions: The incidence of hypothyroidism among DR-TB patients in Indonesia was relatively low in comparison to other countries. Larger study is needed to assess the contributing risk factors for the development of hypothyroidism among DR-TB patients.