

ABSTRAK

Hubungan Karakteristik Klinis dengan Jenis Resistensi Steroid pada Sindrom Nefrotik Resisten Steroid

Evi, Omega Mellyana, Yetty Movieta Nancy

Program Studi Pendidikan Ilmu Kesehatan Anak Fakultas Kedokteran Universitas
Diponegoro, Semarang

Latar belakang: Sindrom Nefrotik Resisten Steroid (SNRS) merupakan kondisi yang tidak mencapai remisi setelah pemberian steroid dosis standar minimal 4 minggu. SNRS dibagi menjadi resistensi primer dan sekunder. Kedua jenis resistensi ini memiliki karakteristik klinis, profil histopatologi, dan prognosis yang berbeda. Identifikasi karakteristik klinis yang berhubungan dengan jenis resistensi sangat penting, terutama di fasilitas kesehatan yang belum memiliki akses pemeriksaan genetik.

Tujuan: Mengetahui hubungan antara karakteristik klinis dengan jenis resistensi steroid pada anak dengan SNRS.

Metode: Penelitian observasional analitik dengan desain potong lintang dilakukan terhadap 83 anak dengan SNRS (usia 1–17 tahun) yang dirawat di RS tersier di Semarang. Data dikumpulkan dari rekam medis. Variabel independen meliputi jenis kelamin, usia onset, hematuria, tekanan darah, konsanguinitas, dan dislipidemia. Analisis bivariat dilakukan menggunakan uji Chi-Square atau Fisher's Exact Test.

Hasil penelitian: Dari 83 subjek, 65,1% merupakan SNRS sekunder dan 34,9% SNRS primer. Mayoritas berjenis kelamin laki-laki (69,9%), rerata usia $11,19 \pm 4,70$ tahun, dan 69,9% berusia 1–11 tahun. Dari analisis bivariat, dua variabel menunjukkan hubungan bermakna dengan jenis resistensi SNRS: usia onset ($p=0,032$) dan hematuria ($p=0,007$). Usia onset ≥ 12 tahun lebih banyak pada SNRS primer (44,8% vs 22,2%), dan hematuria lebih banyak pada SNRS primer (34,5% vs 9,3%). Variabel lainnya seperti jenis kelamin ($p=0,894$), tekanan darah ($p=0,182$), konsanguinitas ($p=0,995$), dan dislipidemia ($p=0,579$) tidak menunjukkan hubungan yang bermakna.

Kesimpulan: Usia onset dan hematuria pada presentasi awal berhubungan bermakna dengan SNRS primer. Kedua variabel ini dapat menjadi penanda klinis awal untuk memprediksi jenis resistensi steroid dan membantu memahami prognosis penyakit pada anak SNRS terutama di fasilitas yang tidak memiliki biopsi ginjal dan *genetic testing*.

Kata kunci: sindrom nefrotik resisten steroid, jenis resistensi, hematuria, usia onset, karakteristik klinis

ABSTRACT

Association between Clinical Characteristics and Steroid Resistance Patterns in Steroid-Resistant Nephrotic Syndrome

Evi, Omega Mellyana, Yetty Movieta Nancy

Department of Child Health, Faculty of Medicine – Diponegoro University
Semarang, Indonesia

Background: Steroid-resistant nephrotic syndrome (SRNS) is a condition in which remission is not achieved after at least 4 weeks of standard-dose steroid therapy. SRNS is classified into primary and secondary resistance. These two resistance patterns have different clinical characteristics, histopathological profiles, and prognoses. Identification of clinical characteristics associated with resistance patterns is important, particularly in health care facilities without access to genetic testing.

Objective: To determine the association between clinical characteristics and patterns of steroid resistance in children with SRNS.

Methods: A analytical cross-sectional study was conducted in 83 children with SRNS aged 1–17 years who were treated at a tertial hospital in Semarang, from August 2025 to February 2026. Data were collected from medical records. Independent variables included sex, age at onset, hematuria, blood pressure, consanguinity, and dyslipidemia. Bivariate analysis was performed using the Chi-square test or Fisher's exact test.

Results: Among the 83 subjects, 65.1% had secondary SRNS and 34.9% had primary SRNS. The majority were male (69.9%), with a mean age of 11.19 ± 4.70 years, and 69.9% were aged 1–11 years. Bivariate analysis identified two variables significantly associated with SRNS resistance patterns: age at onset ($p = 0.032$) and hematuria ($p = 0.004$). An age at onset ≥ 12 years was more common in primary SRNS compared to secondary SRNS (44.8% vs 22.2%), and hematuria was also more frequently observed in primary SRNS (34.5% vs 9.3%). Other variables, including sex ($p = 0.894$), blood pressure ($p = 0.182$), consanguinity ($p = 0.995$), and dyslipidemia ($p = 0.579$), were not significantly associated with resistance patterns.

Conclusion: Age at onset and hematuria at initial presentation were significantly associated with primary SRNS. These variables may serve as early clinical predictors of steroid resistance patterns and help inform prognosis in children with SRNS, particularly in settings without access to kidney biopsy and genetic testing.

Keywords: steroid-resistant nephrotic syndrome, resistance pattern, hematuria, age of onset, clinical characteristics