



POSTER PRESENTATION

Open Access

Plasma renin activity profile of patients with congenital adrenal hyperplasia in Semarang, Indonesia: a preliminary study

Mahayu Dewi Ariani^{1*}, Nani Maharani¹, Udin Bahrudin¹, Agustini Utari^{1,2}, Sultana MH Faradz¹

From 7th APPEs Biennial Scientific Meeting
Nusa Dua, Bali. 14-17 November 2012

Congenital Adrenal Hyperplasia (CAH) is an adrenal disorders due to impaired activity of one of the enzymes required for cortisol and aldosterone biosynthesis. One of the subtypes of CAH is the salt-wasting (SW) form which there is a renal salt loss due to aldosterone deficiency. Plasma Renin Activity (PRA) is the main index used to evaluate the mineralocorticoid control in CAH. PRA testing is almost very rare done for the CAH patients due to high cost, sophisticated laboratory is not available in all region and no compulsory health insurance in Indonesia. The objective of this research was to describe PRA level in patient with Congenital Adrenal Hyperplasia.

This study is a part of CAH cohort study in Center for Biomedical Research (CEBIOR), Semarang, Indonesia. Eighteen patients diagnosed as CAH were drawn blood samples for hormonal test, including 17 OHP, Plasma Renin Activity, Cortisol, and Electrolytes. Clinical history and physical examination was performed to each patients.

All 18 patients (17 female and 1 male) have high 17-OHP level and normal electrolytes levels, but only 14 patients have PRA data. Four patients did not show their PRA level due to fail in too much blood collection. Out of 14 patient, four patients which had history of SW have very high PRA level, while six patients have PRA level more than normal without history of salt wasting. The mean of PRA level in patients with history of SW (47.72 (SD 18.63)) are higher than the patient without history of SW (13.97 (SD 13.3)).

This study suggest that PRA level might be useful for evaluating mineralocorticoid level in CAH. It is proposed to the government to subsidize and provide PRA and

other hormonal testing for CAH in many regions with affordable cost.

Authors' details

¹Center for Biomedical Research (CEBIOR), Faculty of Medicine, Diponegoro University, Semarang, Indonesia. ²Division of Endocrinology, Pediatric Department, Faculty of Medicine, Diponegoro University/ dr. Kariadi Hospital, Semarang, Indonesia.

Published: 3 October 2013

doi:10.1186/1687-9856-2013-S1-P137

Cite this article as: Ariani et al.: Plasma renin activity profile of patients with congenital adrenal hyperplasia in Semarang, Indonesia: a preliminary study. *International Journal of Pediatric Endocrinology* 2013 2013(Suppl 1):P137.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



¹Center for Biomedical Research (CEBIOR), Faculty of Medicine, Diponegoro University, Semarang, Indonesia
Full list of author information is available at the end of the article