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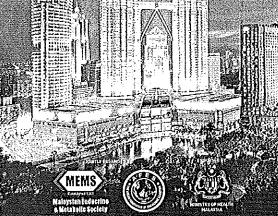
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Prevalence, Awareness and Control of Hypertension in Rural Areas in Sclangor and Perak Siti Liyana Saud Gany, Mohammad Arif Shahar, Norlela Sukor, Ahmad Marzuki Omar, Chong Kuck Meng, Norasyikin Ab Wahab, Rohana Jaafar, Rabizah Md Zain, Long Kha Ching, Amyliation Mohd Razali, Noradilah Zainuddin, Nurul Hani Mat, Fadlin Mender, Musilawati Muhair, Hanita Othman, Siti Fatehah Yusof, Norhisham Rahmat, Khalidah Mazlan Bador, Nor Azmi Kamaruddin Endocrine Unit, University Kebangsaan Malaysia Medical Centre (UKMMC); Kulliyyah Medicine, International Islamic University Malaysia (IIUM); University Malaya (UM); Klinik Lim, Bidor; Pathology and Diagnostic Laboratory Department, UKMMC; Jabatan Perkhidmatan Makmal Diagnostic, UKMMC; Jabatan Perubatan, UKMMC

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## A Prevalence of Elevated ARR in Rural Selangor

Siti Liyana Saud Gany, Mohammad Arif Shahar, Norlela Sukor, Ahmad Marzuki Omar, Norasyikin Ab Wahab, Yusniza MY, Rabizah Md Zain, Long Kha Ching, Amyliation Mohd Razali, Noradilah Zainuddin, Nurul Hani Mat, Fadlin Mender, Musilawati Muhair, Hanita Othman, Siti Fatehah Yusof, Norhisham Rahmat

Endocrine Unit, University Kebangsaan Malaysia Medical Centre (UKMMC); Kulliyyah Medicine, International Islamic University Malaysia (IIUM); University Malaya (UM); Pathology and Diagnostic Laboratory Department, UKMMC; Jabatan Perkhidmatan Makmal Diagnostic, UKMMC; Jabatan Perubatan, UKMMC

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Aung Khaing, Mya Thanda-Sein, Ohnmar, Mya-Mya Thwin, Tint Swe- Latt Department of Physiology, University of Medicine 2, Yangon, Myanmar

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Prasit Leewattanapat, Asst.Prof.Swangjit Suraamornkul

Faculty of Medicine, Vajira Hospital, Navamindradhiraj University, Thailand

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Rohaya Abdul Razak, Sharifah Faradila Muhammad Hatta, Fatimah Zaherah Mohamed Shah, Tengku Saifudin Tengku Ismail, Rohana Abdul Ghani University Technology MARA

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# Phaeochromocytoma Presenting with Thunderclap Headache and Multiple Watershed Cerebral Infarcts

Fatimah Zaherah Mohamed Shah, Jeyakantha Ratnasingam, Sharmila Sunita Paramasivam, Rohaya Abdul Razak, Shireene Vethakkan

University Malaya, Malaysia; University Teknologi Mara, Malaysia

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# Masquerading Pheochromocyotoma

Subashini Rajoo, Nurain Mohd Noor, Masni Mohamad, Zanaria Hussein, Azraai Nasaruddin Hospital Putrajaya, Malaysia

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#### A Prevalence of Elevated ARR in Rural Selangor

Siti Liyana Saud Gany, Mohammad Arif Shahar, Norlela Sukor, Ahmad Marzuki Omar, Norasyikin Ab Wahab, Yusniza MY, Rabizah Md Zain, Long Kha Ching, Amyliation Mohd Razali, Noradilah Zainuddin, Nurul Hani Mat, Fadlin Mender, Musilawati Muhair, Hanita Othman, Siti Fatehah Yusof, Norhisham Rahmat

Endocrine Unit, University Kebangsaan Malaysia Medical Centre (UKMMC); Kulliyyah Medicine, International Islamic University Malaysia (IIUM); University Malaya (UM); Pathology and Diagnostic Laboratory Department, UKMMC; Jabatan Perkhidmatan Makmal Diagnostic, UKMMC; Jabatan Perubatan, UKMMC

Abstract: The objective of this study was to determine the prevalence of elevated Aldosterone Renin Ratio (ARR) in Rural Selangor.

Methods: This was a cross sectional study involving subjects in Kuala Selangor and Tanjung Karang. The World Health Survey Kish tables were used to select cligible subjects (≥18 years old) from each household. Their social demography, past medical history, anthropometric measurement and blood pressure were recorded. Blood were withdrawn for Aldosterone (ALD), Plasma Renin Activity (PRA), Creatinine (creat) and potassium (K). Raised ARR is defined as aldosterone/renin ratio of more than 20.

Results: A total of 392 subjects (age 55 +/- 14.1) were enrolled. Fourty three (11%) subjects showed an ARR > 20. Out of those with raised ARR, 16 (38%) were hypertensive, 2 of which were not taking any anti-hypertensive drugs and 27 subjects (62.8%) were normotensive. Only 2 (4.7%) of them were hypokalemic, one of them being hypertensive. The main clinical characteristics of subjects with raised ARR are shown in Table 1.

Table 1: Demographic and Biochemic	al Parameters of Partic	ipants with ARR level ≥20, ARR < 20
	ARR≥20	ARR < 20
Patients (n)	43	349
Age (years)	$56 \pm 11.8$	$54 \pm 14$
Gender (male/female)	11/32	126/222
Hypertension	16	133
Duration hypertension (years)	$9.6 \pm 7.5$	$8.3 \pm 7.5$
BMI (kg/m²)	27.01 ± 6	$26.8 \pm 5.6$
SBP (mmHg)	118± 35	$122.6 \pm 39$
DBP (mmHg)	$73 \pm 20.7$	$66.6 \pm 28.1$
Serum K+ (mmol/L)	$4.04 \pm 0.5$	$4.15 \pm 0.5$
Serum Creatinine (umol/L)	$77.2 \pm 25.7$	$81.5 \pm 39.5$
Serum ALD ng/dl)	17.4 ± 11.6	$9.8 \pm 9.4$
PRA (ng/ml/h)	$0.48 \pm 0.4$	$3.38 \pm 5.5$
ALD/PRA ratio(ng/dl per ng/ml/h)	41 ± 24	$5.4 \pm 4.7$

Conclusion: The prevalence of raised ARR in Rural Selangor was 11%, and only 4.7% of them were hypokalemic.