



## Prevalence of Hyperechoic Foci in Registered Chronic Kidney Disease Patients of Namphong and Ubolratana Hospitals

Suchakan Rotsaranrom<sup>1</sup>, Atthachai Bundit<sup>1</sup>, Kampanat Inpithak<sup>1</sup>, Pichaya Jaroongjittanusonti<sup>1</sup>, Krittika Orthong<sup>1</sup>, Sorawich Utsaha<sup>1</sup>, Amorn Premgamone<sup>2</sup>, Manop Kanato<sup>2</sup>

<sup>1</sup>5<sup>th</sup> year medical students, <sup>2</sup> Department of Community Medicine, Faculty of medicine, KhonKaen University

**Background and Objective:** Chronic Kidney disease (CKD) is one of the main National health problems in Thailand and one of the causes is nephrolithiasis. The stone size less than 5 mm. is hardly detected by ultrasonography, therefore it could be identified it as "Hyperechoic foci (HPF)". This study was conducted to determine the prevalence of HPF in CKD patients for a better health care prevention. This study aimed to 1. examine the prevalence of HPF in stage-3-and-4 CKD patients 2. identify the associated factors; positive Modified Fist Test (MFT), purine-rich food, and I-san Syndrome (ISS), with HPF.

**Methods:** Descriptive study with subgroup analysis. Location: Ubolratana and Namphong hospitals, KhonKaen province. Population and samples: Purposive sampling was performed to recruit 292 registered patients with CKD stage 3 and 4, aged 18 years and above. Tools: An interview form, medical records, ultrasound records and machine. Statistical analysis: SPSS v.17 and Epi Info v. 3.5.4 were used to analyze central tendency and dispersion, proportions,

95% confidential intervals, Chi-square tests, Odds ratio, and T-test.

**Results:** A total of 136 subjects were included in the study. The mean age was  $69.5 \pm 9.0$  years. In all, 1.7% had a history of kidney stone. The overall HPF prevalence was 77.2% (95% CI 69.07, 83.77). The participants with HPF had positive MFT, purine-rich food and ISS (23.5%, 41.9% and 34.6%, respectively). There were no statistical significance in correlations between the factors mentioned above and HPF.

**Conclusions:** Prevalence of HPF in stage-3-and-4 CKD patients was 77.2%. There were no statistical significance in correlations between the factors mentioned above and HPF.

**Keywords:** Nephrolithiasis, hyperechoic foci, CKD, bamboo shoot, purine rich food, Namphong, Ubolratana

