39. **THE PREVALENCE OF FRANK'S SIGN AND THE DIAGNOSTIC ACCURACY IN CORONARY ARTERY DISEASE AMONG CHEST PAIN PATIENTS AT LAMPANG HOSPITAL, THAILAND.**

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▶ https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=16569s

INTRODUCTION: One of the leading cause of death in Thailand is coronary artery disease (CAD). There are several studies that demonstrated a significant correlation between diagonal earlobe creases (DELC) or Frank's sign and CAD, but data in Thai populations still remains unclear. Because of Frank's sign is easily to observe by health-care professional including medical students, so it was very interesting to use to identify risk of atherosclerosis of the patients in hospital which has limitation of resources. The purpose of the study was to assess the prevalence of Frank's sign and evaluate the diagnostic accuracy in CAD among the angina chest pain patients at Lampang Hospital. **METHODS:** This study was a cross-sectional, observational, study. Three hundred and nine patients with angina chest pain who underwent coronary angiography (CAG) and followed up at the coronary clinic at Lampang Hospital were enrolled in the study. Both ears of the patients were inspected for Frank's sign. The accuracy of Frank's sign was confirmed by three cardiologists and clinical data was collected in medical record form. We excluded the patients whose earlobe could not be clearly observed, including those with keloid/ulcer on the earlobe or those with no earlobe. The correlation of Frank's sign and CAD were analyzed by using logistic regression and receiving operative curve (ROC) curve. **RESULTS:** 64.4% of the angina chest pain patients (N=199) have demonstrated for Frank's sign, unilateral Frank's sign in 12.3% (N=38) and bilateral Frank's sign in 52.1% (N=161). Twenty-one patients (6.8%) were normal CAG and 288 patients (93.2%) were significant CAD, single vessel disease CAD (N=86), double vessel disease CAD (N=83) and triple vessel disease CAD (N=119). The diagnostic accuracy of the Frank's sign revealed that 64.6% for the sensitivity and 38.1% for the specificity. Besides, the positive predictive value (PPV) was 0.935 and for negative predictive value (NPV) showed 0.073. Nevertheless, the positive likelihood ratio (LR+) was 1.032 and 0.947 for the negative likelihood ratio (LR-). Moreover, the area under the curve (AuROC) of Frank's sign with respect to detection of CAD was 0.513 (95% Confidence Interval was 0.385-0.642, P= 0.838). **CONCLUSION**: Frank's sign was observed in two-third of angina chest pain patients at Lampang Hospital and mostly of the patients with Frank's sign were significant CAD. The results of this study showed that Frank's sign was a simple, non-expensive and non-invasive method for medical student and health-care professional to identify risk of CAD.