



Agreement of Spirometry and Posteroanterior Thoracal X-Ray Examinations among Patients with Chronic Obstructive Pulmonary Disease

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Chronic obstructive pulmonary disease (COPD) is a worldwide public health concern. COPD is characterized by some airway limitation that is not fully reversible, progressive, and abnormal inflammation due to noxious gases and particles. COPD diagnosis can be determined by spirometry or posteroanterior (PA) thoracal X-ray examination. Their agreement, however, has not been assessed.

This study was aimed to assess the agreement between spirometry and PA thoracal X-ray examinations. This analytic study was conducted at BBKPM Surakarta from December 2008 to January 2009 using cross-sectional design. A sample of 30 patients was selected by fixed disease sampling technique. The instruments for this study were spirometry and X-ray equipments. Kappa Cohen was chosen as the measure of agreement, and its statistical significance was tested by X^2 test. The data were analyzed using SPSS v.16. The results showed that there is a poor agreement between spirometry and X-ray examinations for diagnosing COPD, and it is statistically non-significant (Kappa = 0.27, $p= 0.143$). Examiners need to enhance their intra-observer accuracy in interpreting PA thoracal X-ray graph to obtain a more accurate diagnosis. Patients should be well informed on the procedure of spirometry and give their good cooperation to obtain valid results.

Keyword: Spirometry-PA Thoracal X-Ray-COPD

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Whatman Flinders Technology Associates (FTA) Card as Polymerase Chain Reaction-based Molecular Diagnostics for Mycobacterium tuberculosis

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Whatman FTA Card is used in forensics, transgenics, transfusion medicine, plasmid screening, food and agriculture testing, drug discovery, genomics, STR analysis, animal identification, diagnostics, pharmacogenomics, and molecular biology. Whatman FTA Card utilize patented Whatman FTA Technology that simplifies the handling and processing of nucleic acids; used with virtually any sample type, blood, cultured cells, buccal cells, plant material, bacteria, plasmids, microorganisms, solid tissue, viral particles, and M13 plaques. Whatman FTA Cards contain chemicals that lyse cells, denature proteins and protect nucleic acids from nucleases, oxidation and UV damage. FTA Cards rapidly inactivate organisms, including blood-borne pathogens, and prevent bacteria growth including Mycobacterium tuberculosis (TB). Storage sample of TB patients can ease the molecular diagnostic test using PCR and electrophoresis so the examination will be more effective and efficient.

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Influence of Hb and Gender on VO₂ max level among Darul Hijrah Students

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Maximum oxygen consumption (VO₂ max) is the maximum amount of oxygen that can be delivered from the lungs to the muscles. VO₂ max refers to the speed of oxygen consumption, not just the amount of oxygen used. This research was an analytic cross sectional study; conducted to determine the influence of hemoglobin level and gender on maximum oxygen consumption among Darul Hijrah boarding school students, using a sample of 30 boys and 30 girls from Darul Hijrah Islamic School obtained by purposive sampling. The VO₂ max in normal hemoglobin group was 47.59 compared with 37.84 in low hemoglobin group ; the differences was statistically significant.

In the second study, VO₂ max was assessed based on gender: VO₂ max among males was 41.41; higher than VO₂ max among females (34,41). No statistically significant difference between groups.

Keywords: VO₂ max, haemoglobin level, gender

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Local and Regional Anaesthesia for Skin Biopsy

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Tissue biopsy in dermatology needs meticulous planning to obtain histopathology results representing all the skin lesions, without developing any unwanted side effect or complication. This review will discuss the mechanism of action and techniques of local and regional anesthesia available to minimize pain during skin biopsy.

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