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## **EARLY ALTERNATION IN PURLMONARY FUNCTION IN ACUTE METABOLIC ACIDOSIS**

By: Reena Segundina K. Katigbak, MD

The cells in our body have to be able to respond continuously to the changes in our microenvironment in order to continue normal function. One of the important homeostatic mechanisms involves pH regulation. The respiratory system is closely linked to these pH regulatory mechanisms. It is therefore, our objective to determine the early alterations in pulmonary mechanics during acute acidosis specifically, to determine the effect of induced acute metabolic acidosis on pulmonary function among normal subjects. Included were 20 healthy subjects without existing renal and pulmonary illnesses. After baseline ABG determinations, all subjects were given 1500 mg of Acetazolamide taken in six divided poses (250 mg every 8 hours). After completion of the test dose, a repeat ABG determination was performed 4 hours no significant change in the pH and  $\text{HCO}_3$ , the subject is then instructed to continue the medication until quantified changes are measured. Of the 20 subjects, only 18 (90%) tolerated the study. The other 2 subjects were excluded because they refused to undergo further ABG determination. Of the 18 subjects, 10 (56%) are males and 8 (44%) are females; mean age is 26 (age range of 24-30 years). Mean measurements of spirometry studies before and after treatment did not show any significant changes. However there were trends in the elevations in forced vital capacity and/or total lung capacity; peak expiratory flow; alveolar ventilation and  $\text{pO}_2$ . Mechanisms were suggested to explain this although further studies are warranted to definitely prove the suggested mechanisms. Phil. Journal Chest Diseases. Vol. 9 No. 1 pp 1-4.

## **PULMONARY DIFFUSION IN PATIENTS WITH INSULIN-DEPENDENT DIABETES MELLITUS AND DIABETIC MICROANGIOPATHY**

By: Dante Cecilio Rey S. Valdez, M.D., Alberto A. Lardizabal, M.D., FPCCP

One of the major complications of Diabetes mellitus, especially the Insulin-dependent type, produces damage to the small blood vessels, characterized by morphologic and biochemical alterations of capillary basal laminae. This results in changes affecting the lungs with possible consequences in diffusing capacity. This study was therefore undertaken to fulfill the following objectives: to determine the relationship of diabetic complications such as proteinuria, and retinopathy with diffusing capacity for carbon monoxide; and to determine the relationship of hemoglobin Alc (HbA1c), duration of diabetes and age with  $DL_{CO}$ . Forth-eight patients were included, of whom only two showed true decline in the  $DL_{CO}$ . There was also no correlation between  $DL_{CO}$  and several diabetes parameters such as HbA1c, age of patient, is still recommended that further studies could help identify temporal pattern of lung involvement and its possible relationship to other organ involvement in diabetes. Phil. Journal Chest Diseases. Vol. 9 No. 1 pp 5-9.

## **EFFECT OF SUPPLEMENTAL OXYGEN IN CIRRHOTIC PATIENTS WITH ORTHOSTATIC DEOXIA**

By: Reena Segundina K. Katigbak-Pompa, M.D., and Lyndon Samson, M.D.

This study ventures on the problem of hypoxemia in patients diagnosed to have cirrhosis of the liver who demonstrate orthostatic deoxia, and thus suspected of having hepatopulmonary syndrome. It will try to determine the presence of orthodeoxia in patients with liver cirrhosis and will compare the clinical profile of “responders” to supplemental oxygen. Thirty cirrhosis and/or signs and (4 females and 26 males, mean age of 53.9 years), 11 of who have stigmata of cirrhosis and/or signs and symptoms of portosystemic encephalopathy stage 1. Arterial blood gases were taken at supine and standing positions both at room air, and after 15 minutes standing with 2 L/min supplemental oxygen. The control group did not demonstrate orthodeoxia. Twenty-eight (93%) of the cirrhotic patients demonstrated orthodeoxia and when given supplemental oxygen at 2L/min, only 77% showed marked improvement or reversal of worsening A-a O<sub>2</sub> gradient ( $p = 3.95E-08$ ). The “non-responders” group was found to have a mean duration of liver disease of 2.6 years and evidence of complications. When orthodeoxia is detected, it is suggested the supplemental oxygen should be instituted to improve arterial O<sub>2</sub> tension and to prevent complications on chronic hypoxemia. Blood gases determination is essential and objective in guiding the clinician in quantifying the adequacy and appropriateness of supplemental oxygen being administered to the patient. Phil. Journal Chest Diseases. Vol. 9 No. 1 pp 10-14.

## **THE PREVALENCE OF ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS) IN THE UP-PGH MEDICAL ICU: A FIVE-YEAR STUDY**

By: Evelyn Victoria E. Reside, MD and Joel M. Santiagué, MD

**RATIONALE:** To document the magnitude of ARDS in the UP-PGH Medical ICU

**OBJECTIVES:** (1) To determine the prevalence of ARDS in the UP-PGH Medical ICU; (2) To identify the patients at risk for ARDS in an ICU setting; (3) To come up with a profile of the typical patient with probable ARDS; (4) To come up with recommendations for further studies on ARDS.

**STUDY DESIGN:** Retrospective chart review of selected patients admitted at the Medical ICU from 1994 to 1998. Patients fulfilling at least 3 of the 4 criteria set by the American-European Consensus Conference on ARDS were labeled as having "probable ARDS", and data collected from their records were analyzed using descriptive statistics.

**RESULTS & CONCLUSIONS:** 29 cases out of 88 retrieved charts were reviewed. The typical patients with ARDS is a middle-aged unemployed male smoker (average of 16 pack years), intubated for a mean of 7 days prior to development of ARDS. The prevalence of ARDS over the 5-year period was computed at 10%, with the most common risk factor being sepsis from pneumonia.

**RECOMMENDATIONS:** We recommend the following: (1) The prospective studies determining the true incidence and outcome of patients with ARDS be done, as there is a paucity of local studies on the matter; (2) That measurement of pulmonary artery wedge pressures be done as part of the routine work-up for ARDS. *Phil. Journal Chest Diseases*. Vol. 9 No. 1 pp 15-18.

## **PROFILE OF NOSOCOMIAL PNEUMONIA IN NON-VENTED ADULT PATIENTS AT SAN JUAN DE DIOS HOSPITAL**

By: Andrew Gonzales, MD and Joven Araneta, MD

A two-year descriptive retrospective study on adult non-vented patients who developed nosocomial pneumonia and describe the demographic, clinical and microbiologic characteristics of these patients. There was an almost equal male to female ration (1.16:1) occurring most commonly on the 7<sup>th</sup> decade of life (61.53%). Initial symptoms were productive cough (46.15%), fever (30.74%) and difficulty of breathing (23.08%) with most presenting after the fourth hospital day (58.85%). Ciprofloxacin was initially given to a 46.15% of the patients. The organisms isolated were *P. aerogenosa* (53.85%), *E. aerogines* (26.92%) and *K. pneumonia* (19.23%). Patients on the seventh decade of life presenting with two or more co-morbidities and those with hospitalization of more than four days an increased chance of acquiring nosocomial pneumonia. Those presenting initially with sudden difficulty of breathing have a higher mortality rate (83.33%). Ciprofloxacin, seems to be an effective drug for nosocomial pneumonia despite showing poor results in the sensitivity testing. *Phil. Journal Chest Diseases*. Vol. 9 No. 1 pp 19-23.

## **PULMONARY PARAGONIMIASIS IN SAN ALFONSO, CATEEL, DAVAO ORIENTAL A CASE SERIES**

By: Glenn A. Pono, M.D.

Paragonimiasis is a potentially serious diseases that is endemic in Southeast Asia, including Japan, Korea and Taiwan. Sporadic cases are also seen in the Philippines. It has been quite a while since reports of cases have been described. As a result, cases may not be easily identifiable with the probability of mistreatment very high. For this reason, four cases are being reported here in order to increase our awareness about the condition. The presenting signs and symptoms, as well as review of the history is provided. In addition, a summary of pathophysiology and treatment options are given. Phil. Journal Chest Diseases. Vol. 9 No. 1 pp 24-29.

**A RETROSPECTIVE STUDY ON PHYSICIANS' ADHERENCE TO THE PCCP  
PHILIPPINE CONSENSUS REPORT ON BRONCHIAL ASTHMA AT THE  
GENERAL MEDICINE CLINIC, OUTPATIENT DEPARTMENT, UP-PGH**

By: Lara Theresa Alentajan-Aleta, MD

**OBJECTIVES:** To assess the conformity of physicians in the general medicine clinic of the Out-patient Department of the UP-PGH Medical Center to the PCCP Philippine Consensus Report on bronchial asthma.

**IMPORTANCE:** Quality of care is assessed in terms of impact of oars and physician adherence to guidelines. The first step in providing appropriate care of asthmatics is establishing the correct diagnosis, dependent on history of episodic attacks, supporting PE findings, and demonstrating reversible airway obstruction.

**DESIGN:** Retrospective chart review.

**SETTING:** UP-PGH OPD General Medicine Clinic.

**SUBJECTS:** From 115 charts given the impression of bronchial asthma during the year 1997 and retrieved from the OPD Records Section, 107 charts were included for analysis.

**RESULTS:** Presence or absence of episodic attacks, nocturnal attacks, and improvement with medications were reported in 64.4%, 54.5%, and 85.3%, respectively. Physical examination entries included chest expansion (100%), wheezes (95.2%), nasal polyps (1%), and signs of atopic dermatitis (1%). In 14% of charts PFTs were ordered. Referral to subspecialties was ordered in 17.9%. Accuracy of diagnosis was subjected to the kappa coefficient calculation. Observed agreement was 0.47 with a chance expected agreement of 0.24, and a kappa coefficient of 0.30, signifying fair agreement. Based on the chart diagnosis, appropriate treatment was prescribed in 60% of cases.

**CONCLUSIONS:** The adherence of the Philippine College of Chest Physicians Consensus Report is fair with the documentation of signs and symptoms of asthma, accuracy of stratification, and appropriate prescription needing improvement. Phil Journal Chest Disease. Vol. 9 No. 1 pp 30-33.