

**SATURDAY AUGUST 2**  
**INTERNATIONAL CONVENTION CENTER**  
**ROOM: SALON BOGOTA**  
**POSTER PRESENTATION**  
**(P. 112 - P. 165)**  
**12:30 - 14:30**

Coordinators:

ALEJANDRINA OSPINA, COLOMBIA  
PEDRO FARIAS, COLOMBIA  
CARLOS HOYOS, COLOMBIA

## PL 112

## CLINICAL STUDIES OF REACTIVE HYPERGLYCEMIA IN ACUTE STROKE PATIENTS

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In order to study the etiology of reactive hyperglycemia (R.H.), we analyzed blood glucose, growth hormone, thyrotropin, cortisol, epinephrine, norepinephrine and glycosylated hemoglobins (HbA1 and HbA1c) in the acute phase of 155 stroke patients. They were 33 subarachnoid hemorrhages, 72 intracerebral hemorrhages and 50 cerebral infarctions. These patients were classified into three categories by their blood glucose concentration, glucose tolerance test and history of diabetes mellitus; Group 1, normal blood glucose, 52; Group 2, R.H. 81; Group 3, diabetes mellitus, 22.

The results from statistical studies were listed as follows: (1) Group 2 had significantly higher concentration of plasma cortisol, epinephrine and norepinephrine than Group 1. (2) Both Group 1 and 2 seemed to have some correlation between the amount of blood glucose and epinephrine. (3) Group 3 being diabetic had higher concentration of glycosylated hemoglobins than the other two.

From these findings, we postulate that excretion of epinephrine could have been stimulated by the stress resulted from the stroke, particularly in subarachnoid hemorrhage. This increased epinephrine in blood, in turn, induced the reactive hyperglycemia.

We recommend that measuring of the hemoglobins would be an effective tool for differentiating reactive hyperglycemia from diabetes mellitus among acute phase stroke patients.

## PL 113

## LOCALIZATION OF LESION AND AUTONOMIC NERVOUS FUNCTION IN ACUTE CEREBROVASCULAR DISORDER.

Omoto K., Shimazu K., Tamura N., Matsuzaki M., Hienuki M., Oiwa K., Maruki Y., Kim H., Yamamoto T. and Hanaguchi K.  
(Department of Neurology, Saitama Medical School, Moroyamamachi, Iruma-gun, Saitama 350-04, Japan)

Autonomic nervous dysfunctions are frequently encountered in patients with acute cerebrovascular disorders (CVD). However, it has been rarely attempted to clarify the relation of the autonomic dysfunctions and the localization of the lesion in the disease.

## SUBJECTS &amp; METHOD

The subjects were 30 patients with acute unilateral CVD with mean age of  $63 \pm 15$  (mean  $\pm$  S.D.) years old and 24 healthy controls ( $62 \pm 8$  years old). The localization of the lesion were determined by means of X-ray CT scanning. Nine had a lesion in the putamen, 5 in the thalamus, 7 in the subcortex, and the remaining 9 showed no confirmed abnormalities on the CT. Hemodynamic functional tests (Aschner's test, cold pressor test) were performed with the continuous measurements of blood pressure, and pulse rate.

## RESULTS

(1) Parasympathetic nervous function: The degree of reflex bradycardia in Aschner's test was significantly lower in the contralateral side of the lesion in the patients with the thalamic or the subcortical lesion as compared to the controls ( $p < 0.05$ ,  $p < 0.01$ ). It was also significantly lower in the contralateral side in the patients with the thalamic lesion than with the putaminal lesion ( $p < 0.05$ ).

(2) Sympathetic nervous function: The degree of reflex hypertension in the cold pressor test was significantly higher in the ipsilateral side of the lesion in the patients with the putaminal lesion than in the controls.

## CONCLUSION

The above data suggest that the patients with the thalamic or the subcortical lesion have a hyporeactivity of the parasympathetic nervous function in the contralateral side of the lesion, and the patients with the putaminal lesion show a hyperactivity of the sympathetic nervous function in the ipsilateral side.

## PL 114

## PROGNOSTIC SCORE IN CEREBROVASCULAR DISEASE.

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The clinical characteristics of prognostic significance were evaluated prospectively in 72 patients with a diagnosis of acute cerebrovascular disease. They were classified into 4 groups according to the level of recovery. Level 1: good recovery (22 patients). Level 2: moderate disability (16 patients). Level 3: severe disability (20 patients). Level 4: death or vegetative state (14 patients). The clinical characteristics of bad prognosis were: over 70 year old, male, cerebrovascular disease or previous transient ischemic attack, sudden onset, arterial tension below 140/90, alteration of consciousness, complete plegia, babinsky, aphasia, glycemia above 120 mg%, several hypodense zones in the computerized tomography of the cranium and definitive diagnosis of embolic cerebrovascular disease or subarachnoid hemorrhage. Those of good prognosis were below 70 year old, female, gradual onset, arterial tension between 140-180/90-120, preservation of consciousness, paresis, absence of babinsky and aphasia, less than 120 mg% of glycemia, normal computerized tomography of cranium and definitive diagnosis of lacunar infarcts. Mortality rate in the acute stage was 14%. A prognostic score was elaborated for acute cerebrovascular disease.

## PL 115

## SEVERE COMBINED IMMUNODEFICIENCY IN TRAUMATIZED PATIENTS FROM THE CATASTROPHE OF ARMERO, COLOMBIA IN 1985.

De Zubiría Jr. E., Orozco O, de Toro P.

Samaritana Hospital, Dept. of Internal Medicine, Immuno-Allergiology Unit.

Ten patients with different traumas were examined, who had survived the catastrophe of Armero, Colombia in 1985, and were referred to the Samaritana Hospital in Bogota.

An immunodeficiency was found, both of the cellular type with severely low titers of total T Lymphocytes in 9 of 10 patients.

The humoral response was altered, showing a lowered serum level of immunoglobulins and low circulating total B Lymphocytes, in 7 of 10 patients.

They were treated unsuccessfully with hyperparenteral nutrition and standard doses of gamma globulin I.V. without improvement of the immunodeficiency state.

We suggest the Hypothesis that, multiple trauma, hypercatabolism, sepsis and surcharge of antigenic molecules, determined a functional paralysis with severe immunodepression.

## Pl. 116

**URTICARIAL VASCULITIS: CLINICAL BEHAVIOR AND ITS RELATION TO HISTOPATHOLOGY**  
Egea A., Ariza A., Severini S., Rey Matiz F., Mercado J., Davila J., Garavito G., Iglesias G.A.: Universidad del Norte - Universidad Libre, Barranquilla - Colombia.

Since 1973, it has been widely accepted that some Chronic Urticaria cases may be considered as the cutaneous expression of a Vasculitis effected by immunocomplexes. Our particular interest for the past three years has been centered at analyzing the clinical behavior of Chronic Urticaria and its relation to histopathology. For that purpose, we studied 30 patients - 5 males, 25 females - affected by persistent urticaria resistant conventional treatment. None of the patients involved were being treated at the time we carried out the present study. The following tests were performed to all patients: 6 mm skin biopsies at critical point of disease utilizing H.E. and special stains. Immuno-Histochemical studies to deposit immunoreactants by direct IF utilizing demo-specific serums IgG-IgM-IgA-C3, C4, Fibrinogen (Hoeschst). Dosage of IgS-C.I.E. and IgE (Elisa). Toxoplasma Tittle by IFI, C3, C4, VDRL. Rheumatoid factor, Anti-nuclear Antibodies and serous markers for Hepatitis B. Patients were divided in two main groups: Group A consisted of 30 individuals whose Histopathology was characterized by Dermal Edema and marked Lymphomonocytic Perivascular infiltrate not compromising the internal wall. Group B had 17 individuals divided into subgroup B1 with 10 patients presenting Lymphomonocytic infiltrate compromising vessel wall. Subgroup B2 with 4 patients showing signs of Fibrinous Necrosis plus Polymorphonuclears. Finally, Subgroup B3 with 3 patients showing Mixed Vasculitis. Based on the aforementioned observations, we concluded that in patients belonging to Group A a precipitant cause could not be established. Four patients presented Recidivant Angioneurotic Edema having very little systemic compromise. Subgroup B1 patients presented only cutaneous expressions and the precipitant cause - chronic infections, drugs - could be established in 7 out of ten individuals. They were noncomplemental and the CIC was negative. Subgroup B2, besides cutaneous picture, presented systemic compromise - articular, renal, and gastrointestinal - and in 3 out of 4 CIC was present. Finally, Subgroup B3 clinical picture was found to be extrictly cutaneous and Noncomplemental. One case was associated to drugs and another to Positive Serology. This study led us to the conclusion that Chronic Urticaria is a Syndrome and that its clinical expression is extrictly related to Histopathology.

## Pl. 117

**ANTICENTROMERE ANTIBODIES: CLINICAL SIGNIFICANCE**

Molina J., González H., González L., Uribe O., Instituto de Reumatología, Medellín - Colombia.

Recently a new type of ANA, directed against the centromere region of chromosomes, has been described. These antibodies were found especially in patients with the CREST syndrome, a variant of scleroderma characterized by calcinosis, Raynaud's phenomenon, sclerodactyly, and telangiectasia.

A retrospective and prospective study of 41 patients found to have 3+ or greater staining positive anticentromere antibodies (ACA) using HEp-2 cells as the substrate was carried out.

Anticentromere antibody (ACA), thought to be a marker antibody for CREST syndrome, was found in the sera of 8 patients (19,5%) with indifferiated connective tissue syndrome. It was present in 7 patients (17%) with Raynaud's disease and in 6 patients (14,6%) with the CREST syndrome. It was also found in a lower percentage in patients with diffuse scleroderma, rheumatoid arthritis, systemic lupus erythematosus, Sjögren syndrome and primary biliary cirrhosis.

It is interesting to note that our 4 lupus patients with ACA positive did not have any other type of antibody and when compared with other lupus patients who exhibit other types of ANA, those with ACA had significantly less major organ system involvement without evidence of renal disease. Over all, Raynaud's phenomenon was found in 27 patients (66%). It is suggested therefore that screening for the ACA should now become a routine procedure mainly in patients with scleroderma, Raynaud's phenomenon or other diseases such as primary biliary cirrhosis, SLE and R.A.

## Pl. 118

**Antibodies Against Spermatozooids in Homosexual and in AIDS Patient.**

NÚÑEZ RAFAEL<sup>+</sup>, M.D., RAAD J., M.D., NÚÑEZ R.C.A., M.D. Profesor, Universidad de Caldas, CEDRI, Associate Profesor, Universidad de Caldas, CEDRI, Resident, Universidad de Caldas, Depto de Pediatría.

The presence of antibodies against spermatozooids was evaluated in a patient with AIDS and six homosexual (HS) indirect immunofluorescence was utilized along with immunoenzymatic trial with peroxidase (Elisa) in order to detect antibodies class IgG addressed against spermatozooids and their membrane proteins. Optic densities of the following patient group were compared: 1. One patient with AIDS. 2- Six Homosexuals (HS). 3- Three HS with cells OKT8 > 30%. 4-Four HS with cells OKT8 < 30%. 5- Three men with Auto-Antibodies against spermatozooids + infertility. 6-Two men without Auto-Antibodies against spermatozooids + infertility. 7-Five women, spouses of the infertile men. 8-Five Multiparous with more than 3 pregnancies. 9-One man with Orchyities. 10-Ten heterosexual, fertile and healthy (C.G). The patient with AIDS and the one with Orchyities had the highest optic density (O,D), groups 1 and 9. Groups 10 and 6 had the lowest and non-differential values of the technique background. Groups 3 and 5 ranked second in place in reference to D.O. groups 2,4,7 and 8 ranked third in D.O. values. Groups 10 and 6 differed significantly at P 0.305 compared with the others. The presence of antibodies against spermatozooids was considered as a meaningful factor associated with AIDS and previous states of the AIDS detected by OKT8 > 30% of Lymphocytes.

## Pl. 119

**A Microelisa for Cysticercosis Diagnosis**

NÚÑEZ R., RAAD J., MUÑOZ A., ESCANDON A., GOMEZ B. CEDRI, Servicio Salud de Caldas, Universidad de Caldas, Facultad de Medicina.

Through a prospective study an ELISA for Cysticercosis diagnosis in C.N.S. was used in 16 patients 5 ul of cerebrospinal fluid (CSF) samples for ELISA against 250 ul of CSF for hemagglutination were analyzed. The ELISA optic densities (OD) means in positive patients 0.102-0.030 (14), For negatives 0.046-0.021 (2) and health persons: 0.342-0.014 (8)

The ELISA sensitivity was 86%, better than hemagglutination.

The CSF ELISA is an easy and use full test for the cysticercosis diagnosis.

## PI. 120

## ELECTROPHORESIS OF PROTEINS IN THE DIAGNOSIS OF CLINICAL ILLNESSES.

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Evaluation of the sensitivity of proteins electrophoresis in a total of 53 patients subdivided in 7 groups of clinical entities which are: acute inflammatory processes, chronic inflammatory processes, neoplasias with or without affection of the liver, hepatitis, the hepatic cirrhosis, nephrotic syndroms and the plasma cells dyscracias.

Obtention of the average of each seroproteic fraction in every one of the groups, showing certain group specificity, although for every one of them in particular, the electrophoresis was only a guidance according to the designed overall pattern.

Graphic representation of the classical pattern of each group that coincided with the sample surveyed.

## PI. 121

## NATURAL KILLER (NK) CYTOTOXICITY IN THE ELDERLY WITH PULMONARY INFECTIONS. POSSIBILITY OF MODULATION WITH INTERFERON (IFN), INTERLEUKIN 2 (IL-2) AND INDOMETHACIN (INDO).

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We found a significant impairment of NK activity against K562 cells in a large number of elderly people with pulmonary infections. In order to evaluate the possibility of improving the cytotoxicity, we incubated *in vitro* blood mononuclear cells of elderly and young donors, considered as controls, in IFN, IL-2 and INDO (lug/ml). The baseline NK capacity in the elderly, equal to  $2.3 \pm 0.7$  was significantly enhanced after IFN treatment:  $3.2 \pm 0.6$ . At the same time, also in the control population (baseline NK activity:  $3.5 \pm 0.9$ ) a significant improvement was noticed when IFN was added to the cultures. After exposure to INDO, the NK activity of aging population resulted in  $2.9 \pm 0.9$  versus  $3.0 \pm 0.8$  in the controls. By contrast, IL-2 enhanced the NK activity of the elderly less significantly:  $2.5 \pm 0.8$ . Moreover, by evaluating the number of large granular lymphocytes we did not observe significant differences in the cell percentages.

Our data indicate a suppressive role connected to adherent cells in the NK activity of the elderly with pulmonary infections, sensitive to IFN modulation increase, less influenced by IL-2, and probably dependent on the decreased IL-2 receptor expression on cells of aging people.

## PI. 122

## IMPAIRMENT OF LYMPHOCYTE-DERIVED CHEMOTACTIC FACTOR (LDCF) PRODUCTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE). Ventura M.T.\*, Troccoli G.°, Tursi A.\*, Bonomo L.°

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Patients with untreated SLE show a reduction of LDCF production when lymphomonocytes are stimulated *in vitro* with Concanavalin A (ConA) and the culture supernatant is used as chemotactic factor in Boyden's chambers. Since the T cell chemotactic activity is principally produced by the Leu-2 (suppressor/cytotoxic) lymphocyte subset in cooperation with monocytes, it is possible to hypothesize that the reduction of T<sub>C</sub> cells in SLE is correlated to the profound impairment of LDCF production. However, it may be postulated that monocytes could play a suppressive role via Prostaglandin E<sub>2</sub> hyperproduction. To confirm the presence of inhibitory adherent cells in patients with SLE, we pretreated monocytes with indomethacin before culture stimulation with ConA, obtaining a significant improvement of LDCF production, but we did not obtain an activity equal to that in normal subjects in culture supernatant of SLE patients.

Data we obtained confirm the monocyte-related inhibitory role in SLE, even though an imbalance of T lymphocyte subset distribution, responsible for the alteration in cell-mediated immunity in SLE cannot be excluded.

## PJ. 123

## CRITICAL EVALUATION OF THE DIAGNOSIS OF INTESTINAL AMOEBIASIS IN DIARRHEA

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In a pediatric center of the city of Bogotá, Colombia between June 1984 and November 1985 we studied 14 patients with diarrheic disease in whose coproscopic exam initially informed the presence of E Histolytic (E.h) trophozoite, but when a new exam was performed in an specialized center of parasitology only one case of intestinal (I.A.) amoebiasis was diagnosed.

Comentarios on the excess of false positive results done with respect to this entity and likewise the abuse of drugs used to treat amoebiasis and the need there is to prepare personnel who are well trained in identifying E. hystolitic, as well as in the correct manipulation of the samples.

## PJ. 124

TREATMENT OF HYPONATREMIC CIRRHOSIS WITH ASCITES RESISTANT TO DIURETICS BY UREA  
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The hyponatremia often observed in cirrhosis results from a disturbance in the urinary excretion of free water. Like in the treatment of the syndrome of inappropriate secretion of ADH (SIADH) in which water retention can be successfully treated by the oral intake of urea, we have studied the effectiveness of this molecule in the treatment of hyponatremia in patients with an ascites resistant to diuretics. In 5 patients with an ascites resistant to a major diuretic treatment (200 to 400 mg spironolactone combined with 40 to 160 mg furosemide/day for 4 of them), urea intake (30 to 90 g/day) induced the following changes: the daily weight changed from a gain of  $0.01 \pm 0.06$  kg/day to a loss of  $1.03 \pm 0.12$  kg/day ( $p < 0.001$ ) (mean  $\pm$  SEM), serum sodium concentration rose from  $128 \pm 1.3$  mmol/l to  $133 \pm 1.4$  mmol/l ( $p < 0.01$ ), sodium output increased from  $24 \pm 4$  mmol/day to  $82.5 \pm 11$  mmol/day, diuresis increased from  $1.05 \pm 0.10$  l/day to  $2.24 \pm 0.24$  l/day ( $p < 0.01$ ). Despite an important weight loss the creatinine clearance did not change significantly ( $53.6 \pm 4.5$  ml/min before and  $70.0 \pm 8.2$  ml/min after urea). Two patients were treated by urea alone. Only the one with limited water intake presented a favourable response. The disappearance of the edema was however more rapid with spironolactone. Additional urea intake in two patients with a good response to diuretics did not induce any further improvement. From the six patients with a resistant ascites, only one had a prerenal uremia after urea treatment. The blood ammonium concentration increased in half of the patients without any clinical signs. After urea withdrawal blood ammonium concentration was normalized within 24 to 48 hrs. Unlike mannitol, urea, at the doses used, did not disturb the urine dilution or concentration capacity, so that when the water supplies were important, its effectiveness disappeared. In order to enhance its efficacy, it is important to take urea together with a long loop diuretic. Intermittent urea intake seemed to be useful in cirrhotic patients with hyponatremia associated with an ascites resistant to diuretics and with low or normal blood urea concentration.

## PJ. 125

SERUM SORBITOL DEHYDROGENASE IN VIRAL HEPATITIS WITH OR WITHOUT ENCEPHALOPATHY.

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This study was conducted to analyse the serial changes of Sorbitol Dehydrogenase (SDH) with SGPT, serum bilirubin and prothrombin time; to assess these as an index of severity and their prognostic value in 50 cases of viral hepatitis with or without encephalopathy. Twenty cases acted as controls. These cases were further divided into anicteric and icteric groups. Serum SDH activity was estimated by the method adopted by Blakley (1951) on the Olympus quickrate autoanalyser. The value of serum SDH in controls varied from 0-2.00 u/lit. Serum SDH attained an early rise and reached its peak value, with maximum hepatocellular destruction, and it registered an early fall to within normal limits with regression of the disease process as compared to other parameters. In patient with encephalopathy the percentage elevation of SDH was significantly higher in cases with icteric than anicteric cases and in those without encephalopathy. The values of SDH registered a rapid and continuous rise in patients who later expired. It was concluded that serum SDH provide a much more sensitive index of severity and is of prognostic value in acute viral hepatitis than SGPT, serum bilirubin and prothrombin time.

## PJ. 126

COMPUTARIZED AXIAL TOMOGRAPHY OF THE LIVER. RESULTA OBTAINED ON 1,200 CASES

Fernán E, Rivero R, Arango M, Ugarte C, González V, Hierro M, Cordero M, Mendizábal F, Agramonte A, Estacholi C.

Center on surgical medical researches (CIMEQ)

The usefulness and accuracy of computerized axial Tomography in the diagnostic of the different sicknesses of liver has been reported by many authors.

The main objective of our task is to present the different results obtained on 1,200 liver's researches, carried out in our center.

All patients were put through several scans, of all the liver, and several mathematics programs for its acute evaluation. In the necessary cases, intravenous contrast (urovist 30%) was administered, plus oral gastrovison, in order to better identify the lesions to be studied. The obtained data were sub-divided by ages, sex, main found and normal pathologies.

## PJ. 127

T3, T4 AND TBG LEVELS ON ACUTE AND CHRONIC HEPATIC DISEASE  
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Since 1951 there are reports on Thyroid malfunction associated with hepatic disease, reflected on T3 and T3 levels which have extrathyroid and mainly hepatic metabolism. Objectives, material and methods: in order to establish thyroid hormone alterations on hepatic disease, the following prospective study was undergone on 27 patients with this diagnosis seen at our hospital between Jan/84 and Feb/85. The patients had different causes for their hepatic disease the course of their disease was established, the presence of thyroid malfunction signs and symptoms was recorded and hepatic function laboratory tests and T3, T4 and TBG titers by radioimmunoassay were performed on each.

Results: mean age was 39.5 yrs; the acute disease was most common among young patients and alcoholism was found on 41% of adults; 30% had positive HBsAg. The group with chronic hepatic disease had greater mortality (6 patients), being hepatic coma the main cause of death (67%). None of the patients had signs or symptoms of hyper or hypothyroidism. On patients with acute hepatic disease a significantly high initial titer of TBG was followed by a rise on titer values on a subsequent blood sample coincident with disease progression; T4 levels were initially low with a later increase to normal with progressive rise associated to acute phase remission. On chronic hepatic disease patients, TBG levels were initially normal and showed significant descent as the disease progressed; there was also a gradual diminution of T4 and specially T3 levels, obtaining a very low titer on patients who did not survive.

Conclusions: Though the following study we concluded that on acute and chronic hepatic disease, there are clearly defined alterations of thyroid hormones, not associated with clinical manifestations of thyroid disease (hyper or hypothyroidism). On acute hepatic disease, TBG levels rise as the disease progresses, being T3 a possible indicator of remission from the acute phase. On chronic hepatic disease the low TBG and T3 levels can reflect liver damage and have prognostic value regarding disease severity. We found no clear explanation for the variations of T4 titers on either group.

## PJ. 128

## A STUDY ON PARACRINE ACTION OF GASTRIN AND SOMATOSTATIN IN THE GASTRIC JUICE.

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In the ambit of the paracrine function turning by gastrointestinal peptides, many Authors have inquired into the relations between gastrin (G) and somatostatin (S) in the gastric juice, putting in evidence an inversely proportional relation between G and S. Our purpose was to inquire into the action of intraluminal G and S before and after maximum stimulation with pentagastrin. Eight subjects with non ulcer dyspepsia and eight subjects with duodenal ulcer have been examined. After a fast night a little nose gastric probe was introduced: three samples were practised, basal, after 15' and 45' after injection i.m. of pentagastrin; the samples were treated with pepstatin A, frozen and then dosed with RIA. The values of basals G and S appeared on an average of 150 and 220 pg/ml without any differences between the two groups. After administration of pentagastrin the values of two peptides were respectively of 800 and 20 pg/ml. Our data proved the real existence of an inversely proportional relation between G and S in the gastric juice before and after stimulation with pentagastrin. That is a further confirmation of the relations of paracrin type in these two peptides: it is probable that the antral S display an inhibitory action directed to the antral G cells having contributed in the regulation of the gastric secretion.

## PJ. 129

## LIVER CIRRHOSIS AND ITS RELATION TO PRIMARY LIVER CARCINOMA IN CZECHOSLOVAKIA

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Ist Institute of Pathology, Charles University, Prague, Czechoslovakia

In the years 1952-1985 the frequency of occurrence of primary liver carcinoma (PLC), metastases to liver, lung carcinoma, colorectal carcinoma, gastric carcinoma, gallbladder carcinoma, carcinoma of pancreas, and of liver cirrhosis was followed. In all the cases studied the diagnoses were confirmed by autopsy findings.

During past decade, a twofold increase was found in the frequency of occurrence of PLC, and a decreased incidence of the other malignancies, in particular of gastric carcinoma and lung carcinoma.

In Czechoslovakia, on the average, 16 patients per 100 000 inhabitants die yearly of liver cirrhosis. Liver cirrhosis is in 42 per cent of patients complicated by the formation of PLC /in cirrhotic terrain/.

In 100 randomly selected patients who died of liver cirrhosis a detailed analysis of total-ly 99 parameters was carried out by means of a computer.

## PJ. 130

## HEPATIC ABSCESS. CLINICAL AND THERAPEUTIC EXPERIENCE

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21 patients with hepatic abscess were analysed at the Centro Médico de los Andes (CMA) (Bogotá), from February 1st, 1983 to January 31st, 1986. From them 7 (33%) were pyogenic and 14 (66%) amebic. Hepatic abscess was diagnosed by echography, scintigraphy or CAT scan. The latter followed by scintigraphy showed the best sensitivity and specificity. There were no major clinical differences between pyogenic and amebic abscess, except for predisposing factors: 5/7 patients with pyogenic abscess had either obstruction of the biliary tree (4) or diverticulosis (1). 5/14 amebic abscesses were drained under CAT scan guidance. Mean defervescence time for those drained was 10 hrs vs. 55 hrs for those treated medically only (Metronidazole). One amebic abscess was also infected with *Str. constellatus*. 6/7 pyogenic abscesses were also drained percutaneously. 2/6 required later surgical drainage. Microbiological studies showed monomicrobial infection in 5 patients (*K. pneumoniae*, *K. ozaenae*, *S. constellatus* and *Bacteroides* sp.). Two cases were polymicrobial (*K. pneumoniae*, *P. vulgaris*, *E. coli* and *B. fragilis*, *Peptococcus* sp. *E. coli*). Only 1/11 patients developed intraabdominal bleeding as a complication of percutaneous drainage. Survival rate was 100%. This observations document the incidence of amebic and pyogenic liver abscess at CMA and points out as many others, the diagnostic importance of CAT scan and liver scintigraphy. On the other hand percutaneous drainage produced a rapid defervescence in amebic abscesses and contributed to an accurate microbiological diagnosis in pyogenic abscesses (in some cases prevented surgery). Further prospective and comparative studies are required to determine whether routine percutaneous drainage may be established in diagnosis and therapy of liver abscess..

## PJ. 131

## COMPUTARIZED AXIAL TOMOGRAPHY OF PANCREAS. RESULTS OBTAINED ON 500 CASES.

Fermín E, Rivero R, Arango M, Ugarde C, González Y, Hierro M, Cordero M, Mendizábal F, Agramonte A, Estacholi C.,

Center on surgical medical researches (CIMEQ)

The usefulness and accuracy of computerized axial tomography in the diagnostic of the different sicknesses of pancreas has been reported by many authors.

The main objective of our task is to present the different results obtained on 500 pancreas researches, carried out in our center.

All patients were put through several scans, of their pancreas; and several mathematic programs were applied to them such as different Gantry's angulations and patients positions. The above mentioned patients were given oral Gastrovisor to facilitate the identification of the studied structures, and in some cases it was necessary to give them intravenous Urovisit 30%. The obtained data were subdivided by ages, sex, main found and normal pathologies.

## PJ. 132

## FATAL AMEBIASIS ANALYSIS OF 100 CASES

Vargas R., Gutiérrez O., Argüello M.

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Amebiasis is a serious health problem in most of the tropical countries. In Colombia 236 out of 1.000 persons carry *Entamoeba histolytica* (EH). We describe 100 cases of fatal amebiasis (FA) observed from 1956 to 1985 over of 11.601 autopsies with a rate of 0.9%. Incidence of intestinal amebiasis (IA) was 41% and amebic liver abscess (ALA) 59%.

Males were predominant with 69%. Time of onset of symptoms was less than 1 month in 63% of cases. Main symptoms of IA were abdominal pain and mucous bloody diarrhea in 100% of cases, dehydration in 70% and tenesmus in 54%. For ALA - fever was observed in 65%, right abdominal upper pain in 56% and hepatomegaly in 45% of patients.

In IA the site of disease was multiple in 75%, rectum and sigmoid in 10% and other sites 15%. In this group death was caused by dysentery in 44%, perforation in 36%, post surgical drainage in 17% and colitis with appendicitis in 2.3%.

Concerning ALA in 57% there was a single abscess, 61% located in the right lobe, 12% in the left and 27% in both. 66% patients had associated intestinal disease and 59% of them with severe colitis. Death occurred after draining into the abdomen cavity in 39%, without rupture in 29%, with drainage into the thorax in 14%, in 12.5% drainage into other places and 5.3% after surgical drainage. Two patients with amebic brain abscess.

We remark that all cases of peritonitis caused either by abscess rupture or intestinal perforation died.

Clinical diagnosis was correct only in 40% of IA and 46% of ALA patients. EH was shown histologically in intestinal tissue in 74% of cases and 72% in liver lesions. This finding was inversely correlated with the lack of a specific treatment.

Mortality analysis of our ALA cases during a period of 16 years compared with that in a similar one in the same hospital previous to introduction of metronidazol, shows a mortality rate of 6.9% and 10.1% respectively.

## PJ. 133

## HEPATITIS ASSOCIATED WITH CHRONIC HEMODIALYSIS

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Post-transfusional viral hepatitis is a common complication in hemodialysis. The risk of this type of hepatitis varies widely in the literature and there are reports with data as low as 1 case in 1775 packed red blood cells and as high as 13 cases in 1000 units transfused.

Objectives, material and methods: we review retrospectively the program at the Renal Unit of the Hospital San Ignacio to find out the real incidence of hepatitis in our experience. We analyzed the group from Jan/83 until Dec/85 checking number of dialysis per patient, time on dialysis, number of transfusions and cases of hepatitis analyzing type and course of aspartateaminotransferase and alanineaminotransferase at least 2 times their normal values in 2 consecutive samples with 8 days' difference.

Results: we studied 33 patients with a mean age of 40.1 yrs. (r=25-65) and founded 6705 hemodialysis performed with a mean of 302,1±122 per patient and time on dialysis of 18,4±9 months; there were 594 transfusions with 934 packed red blood cells, which means 19±11 transfusions, 30±18 units per patient (1.55±0.34 units/transfusion/patient) and a frequency of 3.05±1.2 transfusions every three months, having mean hematocrites of 29.5±2.5% and hemoglobins of 9.36±0.8 gr%. There were performed 6.9±3 HBsAg per patient, one every 2.9±1.2 months. In one patient (3.03%) we found asymptomatic hepatitis with negative HBsAg.

Conclusions: The mean Hct. related with the number of transfusions performed and the low incidence of hepatitis observed in the group coincides with the lowest values informed in the world literature in respect with the incidence of cases per blood units transfused.

## PK. 134

## STUDY OF THE CHEMICAL CONTROL OF BREATHING. CARBON DIOXIDE REBREATHING TEST.

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The chemical control of breathing is studied by measuring the increase in minute ventilation (VE) produced by an increase in PCO<sub>2</sub> ( $\Delta VE/\Delta CO_2$ ) obtained by rebreathing a mixture of 7-8% CO<sub>2</sub> and 80-90% O<sub>2</sub> in closed circuit.  $\Delta VE/\Delta CO_2 = 2.73 \pm 1.2$  L/min/mmHg. Increase in seric HCO<sub>3</sub><sup>-</sup> and bone, neuromuscular or pulmonary diseases that decrease the ventilatory capacity, make the ventilatory response to CO<sub>2</sub> less than normal, without a coexisting decrease in chemoreceptors sensibility. The following cases are examples of this situation: a 16 years old female with dorsal scoliosis of 65° and severe restrictive pulmonary disease:  $\Delta VE/\Delta CO_2 = 0.3$  L/min/mmHg; a 28 years old female with S.L.E. and metabolic alkalosis secondary to steroid therapy (HCO<sub>3</sub><sup>-</sup> 28), with normal spirometry,  $\Delta VE/\Delta CO_2 = 0.66$ ; and 48 years old female with severe COPD,  $\Delta VE/\Delta CO_2 = 1.2$ . The patients with alveolar hypoventilation frequently present with a decrease in ventilatory capacity and hypercapnia with secondary increase in HCO<sub>3</sub><sup>-</sup>; difficulting a correct interpretation of the ventilatory response to CO<sub>2</sub>. With MVV it is possible to calculate the minimal ventilatory response to CO<sub>2</sub> in patients with pulmonary disease. This allows us to differentiate between those with mechanical limitations and those with a decrease in chemoreceptors sensibility; still illdefined is the role of HCO<sub>3</sub><sup>-</sup> in this clinical setting. Three patients were studied (1 primary alveolar hypoventilation, 2 sleep apnea); all of them showing hypercapnia (PaCO<sub>2</sub> = 44.6) and increased HCO<sub>3</sub><sup>-</sup> (26). The average  $\Delta VE/\Delta CO_2 = 0.531$  L/min/mmHg, less than the minimal calculated response by MVV. The three patients were treated with Dichlorphenamide obtaining a decrease in HCO<sub>3</sub><sup>-</sup> down to 17.6 and an increase in  $\Delta VE/\Delta CO_2$  up to 1.86; a value over the minimal calculated. These findings suggest that the chemoreceptors sensitivity to CO<sub>2</sub> is diminished due to an increase in plasma HCO<sub>3</sub><sup>-</sup>, phenomenon that disappears when HCO<sub>3</sub><sup>-</sup> returns to normal levels; and the decrease in  $\Delta VE/\Delta CO_2$  could be explained by impaired ventilatory capacity.

## PK. 135

VENTILATORY RESPONSE TO CO<sub>2</sub>. CARBON DIOXIDE REBREATHING TEST.

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Ventilation is exquisitely sensitive to increasing PCO<sub>2</sub>. That acts by increasing the acidity of the C.S.F. which stimulates chemoreceptors near the central respiratory neurons. The system is studied by measuring the increase in minute ventilation (VE) produced by an increase in PCO<sub>2</sub> ( $\Delta VE/\Delta PCO_2$ ) obtained by rebreathing a mixture of 7-8% CO<sub>2</sub> and 80-90% O<sub>2</sub> in a closed circuit. PCO<sub>2</sub> is measured by a rapid response infrared analyzer and VE by a pneumotacograph both located in the expiratory limb of the circuit. The ventilatory response to CO<sub>2</sub> has a wide range of normal values; some authors state that this is due to differences in ventilation capacity, age and anthropometric differences. To standardized the test at the altitude of Bogotá and to establish if ventilatory capacity, sex, age or anthropometric variables modify the ventilatory response to CO<sub>2</sub> we studied 17 normal subjects. The  $\Delta VE/\Delta CO_2$  obtained was  $2.73 \pm 1.2$  L/min/mmHg and was very similar to the response obtained at sea level ( $P < 0.05$ ) was no correlation between  $\Delta VE/\Delta CO_2$  and the ventilatory capacity, anthropometric variables or sex of the subjects ( $r < 0.47$ ,  $P > 0.05$ ); the correlation with age was 0.6 ( $P < 0.05$ ).  $\Delta VE/\Delta CO_2$  was  $3.4 \pm 1.29$  in the group under 30 years and  $1.99 \pm 0.45$  in the group above 40 years ( $P < 0.05$ ). The characteristic of these groups were similar, the same as the increase of CO<sub>2</sub> during the test; indicating there is a decrease in the central response to chemical stimuli with advancing age.

## PK. 136

RESPIRATORY THERAPY (RT); ITS EFFECTS ON THE CHRONIC OBSTRUCTION TO AIR FLOW (CAO). STUDY WITH COMPUTARIZED PLETHYSMOGRAPHY. FIRST EXPERIENCE IN COLOMBIA. Caballero A., Castillo A., Palacio A., Rodriguez CL., Salguero G., y Zubieta MM. Pneumology Division, Clínica Caja Nacional de Previsión, Bogotá, D.E.

The RT in its different ways is often used on treatment and rehabilitation of the patient with CAO. A prospective clinic study was carried out in 25 patients having light (4), moderate (9) and severe (12) CAO to examine the RT effects. Patients were divided into two groups: the first one (13 patients) was made Ultrasonics Nebulization with terbutaline 10', percussion, bronchial drainage and attending cough; the second group (12 patients) did not get bronchial drainage. Before and half an hour later the RT they were made arterial gases (22-88% of the 25 patients were hypoxemic; any significant change was observed) and functional studies (FE) with corporal computerized Plethysmograph consisting on the measurement of: FVC, FEV1, MEF50, MEF75, Raw, RV, ITGV, ERV, TLC, FEV1/FVC, RV/TLC. The answer obtained in the first 8 parameters which were having into account was: resistance airways (Raw) improved in 17 (68%, with a significant level  $P < 0.05$  with the significance test for proportions), FEV1 (32%,  $P = 0.974$  NS), MEF50 (44%,  $P = 0.27$  NS), MEF75 (36%,  $P = 0.930$  NS), FVC (40%,  $P = 0.15$  NS), RV (60%,  $P = 0.15$  NS).

From the 25 examined patients 23 improved in 1 or many test (92%), with a level of  $P < 0.000001$ . There was no significant difference in the 2 groups. The improvement of the Raw was in rate of 1.7771 on H2O (32%). The difference of response between Raw and FEV1 had a level of significance  $P < 0.05$  when analyzing with the hypothesis test "T students" on account of the Raw. The results obtained on this research point that the RT improves the pulmonary function on patients with light, moderate and severe CAO. The Raw was the best parameter to give the documents for the functional improvement.

## PK. 137

CHRONIC OBSTRUCTIVE LUNG DISEASE. DIAGNOSIS AND DETERMINATION OF RELATIVE RISK IN A PROGRAM OF PERIODIC HEALTH EXAMINATIONS.

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Periodic health examinations are justified when they provide early diagnosis of treatable diseases or identify risk factors that can be modified or suppressed. To establish which procedures satisfy these requirements regarding chronic obstructive lung disease (COLD) we analyzed the results obtained in a periodic examination program at Fundación Santa Fé de Bogotá. Methods: 349 subjects of 20 to 70 years were studied by the Pulmonary Physiology Lab. from 15-09-85 to 15-02-86 by physical examination, spirometry and a standard questionnaire of respiratory symptoms, smoking history and environmental factors. Obstructive alterations were defined by  $VEF_1$  or  $FEF_{25-75}$  under 85% or  $FEV_1/FVC$  under 70%. Restrictive alterations by FVC and FEV under 85% or  $FEV_1/FVC$  over 75%. The risk of COLD was determined with the "Tecumseh Index" (Am Rev Resp Dis 1982 125:144).

Results: Restrictive alterations were observed in 10 subjects and obstruction due to asthma in 6. In the remaining group of 333 subjects 77 per cent were males, 65 per cent had 30 to 49 years, 34 per cent were current smokers and 25 per cent ex-smokers. COLD was diagnosed in 7 patients. The "Tecumseh Index of Risk", despite a normal spirometry, identified 62 subjects with moderate and 7 with high risk of COLD (21% of the group studied). Current smokers had a probability of being included in the moderate or high risk 27 times greater (confidence interval I 95% C) and ex-smokers 19 times greater (I 95% C) than non smokers. Males had a risk 3 times greater than females. Age by itself was not statistically significant.  $FEF_{25-75}$  was normal in the group with moderate or high risk.

Conclusions: 1. The use of spirometry alone was not an efficient method for the early diagnosis of COLD and could even be counterproductive by giving a false idea of security when it is normal in a subject at risk. 2. The "Tecumseh Index" of risk of COLD, whose predictive ability has been validated in multicentric studies (Am Rev Resp Dis 1984 130:380) seems to be an efficient method for the identification of population at risk by selecting in a group of smokers those who should be submitted to an aggressive program of smoking behavior modification. 3. The follow up of the group studied should provide confirmation of the validity of the Index in our population.

## PK. 138

ALVEOLO-ARTERIAL OXYGEN GRADIENT  $[D(A-a)O_2]$  IN PATIENTS WITH METHANOL TOXICITY

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The observation of a "negative"  $D(A-a)O_2$  in two patients with methanol intoxication lead us to review all the patients with methanol intoxication admitted to Hospital San Ignacio from July 1, 1984 to december 31, 1985 in order to confirm this observation and to establish its mechanism.

**Materials** 1. Study group: 31 arterial blood gases obtained in 12 patients. 2. Control group: 58 arterial blood gases obtained in the same dates used to exclude a technical error 3. Alveolar Air equation:  $D(A-a)O_2$  was recalculated using the complete equation:  $D(A-a)O_2 = FiO_2(p_b - PH_2O) - PaCO_2$  ( $FiO_2 = 1 - FiO_2/R$ ) -  $PaO_2$ . we assume an  $R = 0.8$  with  $PaCO_2 \geq 30$  mm Hg and an  $R = 1.0$  with  $PaCO_2 < 30.4$ . Once the possibilities of calibration and mathematical error were excluded we tested the hypothesis that methanol in the arterial blood was responsible of the negative gradient by constructing a curve relating  $PO_2$  and methanol concentration in distilled water. **Results:** 1.  $D(A-a)O_2$  in the study group was  $-2.00 \pm 8.76$  with the simplified equation or  $-2.99 \pm 8.76$  with the complete equation.

$D(A-a)O_2$  in the control group was  $+23.86 \pm 10.97$  with the simplified form or  $+19.82 \pm 11.99$  with the complete form, ruling out a calibration error ( $p < 0.05$ ). In one patient of the study group in which  $R$  was actually measured.  $D(A-a)O_2$  was  $-3.93$ . 2. The  $PO_2$  of the methanol solution was always above the measured  $PO_2$  of distilled water. There was logarithmic correlation between methanol concentration and  $PO_2$  of the solution. **Conclusions:**

1. The arterial blood gases in methanol intoxication show metabolic acidosis and a "negative"  $D(A-a)O_2$ . 2. This finding may have diagnostic value. 3. The hyperoxia observed in these patients seems related with the methanol concentration but the exact mechanism is not known.

## PK. 139

SILICOSIS IN PATIENTS WORKING IN ACTIVITIES NOT RELATED TO THAT CLASSICALLY KNOWN TO PRODUCE IT.

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We reviewed the clinical records of 10 patients diagnosed as Silicosis by lung biopsies without history of have been working in activities known to produce such disease. Half of our patients were males dedicated to agriculture since youth and the other five were women whom have cooked with fire-wood all the life. In all of our patients we reviewed the clinical and laboratory findings as we do with the radiology and pathology. In all our patients we demonstrate silica and anthracosis by histological studies. We speculate the possible mechanism of silicosis in these two groups, and we conclude that the prolonged exposure to fire-wood smoke and ash, and the close contact with the soil may produce chronic nodular silicosis. We do not know a previous report proving silicosis histologically in patients like ours.



## PK. 140

## CLINICAL RADIOLOGICAL FORM OF THE PULMONARY MYCOSIS.

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A mixed study, both prospective and retrospective, was carried out concerning the cases with a diagnosis of systemic mycosis with pulmonary involvement registered at the "Comandante Fajardo" and "Calixto García" hospitals in the last 5 years.

An analysis of the behaviour of these diseases was made as to antecedents, clinical indications and radiological forms, as well as to the most important means of diagnosis.

Obtention of multiple micronodular radiological forms of mycetoma, both bronchopneumonic and pleural, with predominance of the first.

Emphasis is made on the fact that these illnesses are very rarely diagnosed.

## PK. 141

## EVALUATION OF ALPHA-1 ANTITRYPSIN IN EMPHYSEMATOUS PATIENTS.

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Prospective survey of 20 emphysematous patients, condition ascertained by clinical, radiological and respiratory functional tests, to whom doses of Alpha-1 antitrypsin were administered and correlated with proteins electrophoresis. Exposition of the main pathogenic effects of the pulmonary emphysema, making emphasis on the breaking of equilibrium between aggressive and defensive factors, having on the latter ones a very important influence the anti proteases and the Alpha-1 antitrypsin. Concentration to very high levels of Alpha-1 antitrypsin, what was considered as a consequence of the smoking habit and the coadjuvant bronchopulmonary infections that can act as aggressive factors and cause a greater release of proteolytic enzymes in the pulmonary interstice.

## PK. 142

## A RAPID ESTIMATE OF DEAD SPACE

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It was shown in a previous study that the end-tidal PCO<sub>2</sub> does not correlate well with PaCO<sub>2</sub>; the difference between them was suggested to be indicative of dead space. In this study we have compared the measurement of dead space volume done by collecting expired gas and applying the Bohr equation with the gradient PteCO<sub>2</sub>-PaCO<sub>2</sub>.

**Materials and methods:** we studied intubated patients who required mechanical ventilation and measured simultaneously

- a-PCO<sub>2</sub> in expired gas collected in a Douglas bag.
- b-PteCO<sub>2</sub> with a Hewlett-Packard capnometer, of rapid response.
- c-PaCO<sub>2</sub>

**Results:** there were twenty measurements done in ten patients; four of which had a diagnosis of COPD, four had ARDS and 2 pneumonia. The statistical analysis practiced showed a good correlation (0.78, p less 0.01) between the volume of dead space measured by collecting expired gas and the gradient PteCO<sub>2</sub>-PaCO<sub>2</sub>.

**Summary and conclusions-**

- There is a correlation between dead space volume measured by expired gas and the gradient PteCO<sub>2</sub>-PaCO<sub>2</sub>.
- In critically ill patients the rapid response capnometer provides a useful monitoring aid to assess dead space.

## PK. 143

ARTERIAL/ALVEOLAR O<sub>2</sub> RATIO V.S. ALVEOLAR/ARTERIAL O<sub>2</sub> GRADIENT AS AN INDEX OF GAS EXCHANGE ALTERATIONS IN THE RESPIRATORY DISTRESS SYNDROME.

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The alveolar/arterial O<sub>2</sub> pressure difference, D(A-a)O<sub>2</sub>, as an index of gas exchange reflects diffusion impairment, ventilation-perfusion imbalance and true shunt. It is difficult, however, to assign clinical significance to a given value since the normal standards for the altitude of Bogotá have not been established, and the few values reported at sea level vary widely for FIO<sub>2</sub>, below 1.0. Arterial/alveolar O<sub>2</sub> ratio (a/A O<sub>2</sub>) as an index independent of FIO<sub>2</sub> has been considered more adequate to grade the severity of gas exchange impairment in ARDS (Am Rev Resp Dis 1984 130:791).

To confirm this observations we studied 562 arterial blood gases measured in 20 patients with ARDS and 2 infants with hyaline membrane. The correlation between the average PaO<sub>2</sub>, D(A-a)O<sub>2</sub> and a/A O<sub>2</sub> at each FIO<sub>2</sub> was studied by the minimal squares method.

**Results:**

FIO <sub>2</sub>	0.21	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.0
PaO <sub>2</sub>	45	63	78	65	63	64	67	76	70	68
D(A-a)O <sub>2</sub>	33	84	105	130.8	162	211	254	300	358	402
a/A O <sub>2</sub>	0.57	0.42	0.39	0.33	0.28	0.22	0.26	0.20	0.16	0.15

**Comentarios:** 1. PaO<sub>2</sub> did not change significantly because PEEP was applied and FIO<sub>2</sub> increased as the disease progressed in an attempt to maintain arterial oxygenation. Accordingly PaO<sub>2</sub> alone has no quantitative value. 2. D(A-a)O<sub>2</sub> has a statistically significant linear correlation with FIO<sub>2</sub> at all levels (P<0.001) indicating that FIO<sub>2</sub> is a mayor determinant of D(A-a)O<sub>2</sub>. D(A-a)O<sub>2</sub> as an isolated figure is not a good index of the severity of the disease and to be clinically useful it should be compared with normal standards that are not available. 3. The relationship between a/A O<sub>2</sub> and FIO<sub>2</sub> was not significant (P>0.05), indicating that as an index of gas exchange alterations is independent of FIO<sub>2</sub> and therefore more useful to quantify these alterations. In 18 of 22 patients, a/A O<sub>2</sub> was under 0.30 when FIO<sub>2</sub> was under 0.5 and D(A-a)O<sub>2</sub> was not very elevated suggesting that the ratio is impaired earlier. The a/A O<sub>2</sub> ratio decreased progressively from 0.42 at an FIO<sub>2</sub> of 0.21 to 0.22 at an FIO<sub>2</sub> of 0.6. From this point on, its percentual change was inferior to the percentual change in D(A-a)O<sub>2</sub> suggesting that a figure of 0.22 can be considered an index of severe impairment regardless of the FIO<sub>2</sub>.

## PK. 144

THE CLINICAL HETEROGENITY OF THE SWYER-JAMES SYNDROME. A GUIDE TO THE DIFFERENTIAL DIAGNOSIS OF THE UNILATERAL HYPERLUCENT LUNG.

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The Swyer-James Syndrome (SJS) is characterised by abnormal hyperlucency of one lung (or lobe), with the hyperlucent lung of normal size or smaller than the unaffected lung. The clinical presentation of SJS however can vary strongly. To stress the important clinical heterogeneity of SJS we studied three patients who presented respectively with no symptoms, with hemoptysis and with unilateral pulmonary edema. Detailed roentgenological, angiographical, isotopical and bronchographical investigations were part of the study. The diagnostic criteria of SJS are defined for each investigational technique, and a strategy for differentiating the often difficult problem of unilateral lung hyperlucency is proposed.

## PK. 145

BRONCHOALVEOLAR LAVAGE (BAL), CHARACTERISTICS IN PROGRESSIVE SISTEMIC SCLEROSIS (PSS) AND CREST SYNDROME.

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Seven patients with diagnosis of PSS and three patients with diagnosis of CREST syndrome were studied. There were eight women and two men with ages ranging from 19 through 74 years (mean age= 44 years) and a mean evolution time of the disease of 8.6 years. Six patients suffered from achalasia and gastroesophageal reflux. Two groups were established:

- Group A, made up of six patients (including CREST patients) with fine basal bilateral rales; the lung involvement was confirmed by chest x-ray, pulmonary function test (PFT) and transbronchial biopsy.

- Group B, made up of 4 patients without any evidence of pulmonary involvement.

The following test were practiced on the whole group: digital and proximal skin biopsies, chest x-rays, esophagogram, PFT, transbronchial lung biopsy and BAL.

Total cellular and differential counts, subpopulations of T & B Lymphocytes, protein electrophoresis, Immunoglobulins, Alfa-1-AT, ANA, ASMA, AMA, APCA, Anti-Sm, Anti-RNP, Anticentromere Antibodies, Fibronectin Acidglycoprotein, Angiotensin Converting-enzyme, enzymatic levels (Alkaline and Acid phosphatase, SCOT, SGPT, LDH, peroxidases) were all investigated on both BAL and peripheral blood. Also bacterial cultures and a direct smear for AFB were performed in BAL.

Neutrophilic alveolitis was documented in 5 of the 6 patients in Group A finding immune complexes and high IgG levels in serum. There was no correlation with the different antibodies, fibronectin and the enzymes in BAL.

The sixth patient of Group A had an alveolitis but no alteration in the differential cellular count.

This patient had a marked elevation in the levels of immune complexes in serum and BAL.

## PK. 146

PHYSIOLOGIC RESPONSE TO TREADMILL EXERCISE IN BOGOTÁ.  
 ALTITUDE 2640 mts.

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The physiologic response to treadmill exercise at sea level has been established by several authors. In order to establish if the altitude of Bogotá modifies this response we studied 16 healthy non trained volunteers, older than 35, who have lived in Bogotá for many years.

Methods: the treadmill exercise was done according to the Bruce protocol, with 2.5% increments in speed and slope every minute until 80% of the maximal response. RF and Ve were measured with a pneumotacograph, HR was obtained for a continuous ECG; VO<sub>2</sub>, VCO<sub>2</sub> and R were calculated from expired air sampled from a mixing chamber and analyzed for PeO<sub>2</sub> and PeCO<sub>2</sub> in an polarographic electrode. The basic data was processed by a computer and R, METS, O<sub>2</sub> pulse, double product and anaerobic threshold were computed for the basic data.

Results: VO<sub>2</sub> max was 1329=290 ml. for males and 1090=238 ml. for females; HR 147=10 for males and 146=6 for females. These values (and METS, O<sub>2</sub> pulse) correspond to 80% of the maximum values reported by Bruce and show no differences with this absolute values. VO<sub>2</sub> max in women was 77% of VO<sub>2</sub> max in men. The relation of VO<sub>2</sub> and HR was linear. VO<sub>2</sub> and VCO<sub>2</sub> showed a symmetric linear increments up to state 7. At this level there was an increase in the VCO<sub>2</sub> slope suggest that this state correspond to the anaerobic threshold. VO<sub>2</sub> at anaerobic threshold was 63% of VO<sub>2</sub> max. O<sub>2</sub> pulse was 4.33=1 at state 1 and 8.49=1.2 at the maximum level attained. The only difference with reported values was an increase in respiratory equivalents for VO<sub>2</sub> and VCO<sub>2</sub> (Ve/VO<sub>2</sub> and Ve/VCO<sub>2</sub>).

Conclusions: The response to exercise in Bogotá is similar with the response at sea level except Ve/VO<sub>2</sub> and Ve/VCO<sub>2</sub> indicating that despite the altitude (2640 mts.) the values used at sea level are applicable in Bogotá. We explain the difference due to the hyperventilation that results from a mild hypoxemia present at this altitude. Previous studies done at H. San Ignacio confirm this increase in VA with the consequence decrease in PCO<sub>2</sub> (30 mm Hg) and HCO<sub>3</sub><sup>-</sup> (18 meq).

## PK. 147

A MODIFICATION TO THE HYPEROXIC CURVE  
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The determination of the arterial pressure of oxygen when this is applied to fraction approaching one allows to do physiologic diagnostic in relationship to the presence or not of anatomic shunt, venous admixture, defects in gaseous exchange an alveolar hypoventilation. This procedure requires five arterial punctures. When we was studying the interstitial lung disease we found that the in the second arterial puncture was possible to interrupt the procedure if this sample were normal and the alveolar-arterial gradient was equally normally. To prove the anterior finding we studied 21 patients with proved interstitial lung disease in which we administrated oxygen with a FIO<sub>2</sub> of 0.85 and in all of them the PaO<sub>2</sub> after 5 minutes and the D (A-a)O<sub>2</sub> were normal.

We conclude that in this procedure the most useful sample is the obtained after five minutes.

## PK. 148

## CONVENTIONAL SPIROMETRY IN THE DIAGNOSIS OF OBSTRUCTION IN THE UPPER AIRWAYS.

Pedro Reyes Pérez, Jorge Restrepo Molina.

By a careful analysis of the simple Spirometry it is possible to diagnose severe and fixed obstruction of the upper airways. The parameters to be measured are: The FFD-25%, the FEV1-TFV3\* and the MVV. We analyze 13 patients with proved severe obstruction in the upper airways and we find a severe and dramatic reduction in the flows. The average was the following:

The VEFI X 38.07%  
The FEF 0-25 X 46.46  
The FEV 3\* X 80.23%

The vital capacity was only moderately reduced to a X 87.38%. The Spirometry is characterized by a right and oblique line.

## PK. 149

## ENDOTRACHEAL SUCTION AND ARTERIAL OXYGEN SATURATION.

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It is known that endotracheal suction might lead to hypoxia sometimes of a degree associated with morbidity and mortality in patients with mechanical ventilation. In order to establish the method that produces the least desaturation we studied 16 patients with respiratory failure treated with mechanical ventilation (MV) and orotracheal intubation. Arterial oxygen saturation was determined with a cutaneous ear oximeter (HP 47201A). Endotracheal suction (ES) was done with a sterile catheter IAF. The methods used were: 1. FiO2 unchanged, 4 rapid tidal volumes (VT) before and after ES. 2. FiO2 >0.8 4 rapid VT before and after ES. 3. Straight ES. 4. Suction trough a valve with a diaphragm that maintain airway pressure (Paw) during ES. 5. VT given by the nurses with ambu bag (FiO2 0.5), without control of rate or VT. Basal SaO2c, the lowest SaO2c produced by ES; the change produced by ES ( $\Delta$  SaO2c), the elapsed time between the start of ES and the initial decrease in SaO2c (ti), the elapsed time between the start of ES and the maximal decrease in SaO2c (tm), the elapsed time between final of ES and return to basal SaO2c (tr) were analyzed.

Results:

Variable Measured	ES EMPLOYED				
	1	2	3	4	5
Basal SaO2c %	95	96.9	95.3	94.8	94.9
Lowest SaO2c %	93.13*	96.4	91.29*	94.3	86.46*
$\Delta$ SaO2c	2.87*	0.5	3.37*	0.5	10.56*
ti (Seconds)	17.06*	2.81	13.43*	5.43	-
tm (Seconds)	31.87*	5.62	29.06*	8.75	116.6*
tr (Seconds)	39*	7.87	50.36*	13.5	94.1*

\*p &lt; 0.05

Comentary: a. The least desaturation was obtained by the use of a valve that maintain Paw during ES or by increasing FiO2 > 0.8.

b. The use of ambu bag with FiO2 0.5 (that incident is the method more frequently used in the ICU) produce the most marked desaturation, we don't know whether this desaturation is due to the low FiO2 or to the decrease in VT related to manual ventilation.

c. The methods that do not change the FiO2 are accompanied by less intense desaturation.

Conclusions: We suggest the use of the sealing valve as the standar procedure during ES. The increased FiO2 to > 0.8 prevents desaturation could be undesirable under certain circumstances. The manual ventilation leads to hypoxemia that was not associated with morbidity in this study.

## PK. 150

## UTILIZATION OF INTERFERON AND RADIOTHERAPY IN NON-SURGICAL TUMORS OF THE LUNG; PRELIMINARY EXPERIENCE.

Selman-Houssein Abdo, E.; Cepero Nogueiras, M.; Fonseca Cruz, Juli Ramon Ramirez, A. J. J. L. A.

We present 10 patients with non-surgical neoplasms of the lung. Eight patients had epidermoid carcinoma and two had adenocarcinoma. They were treated with leucocitary Alpha Interferon and Radiotherapy. Of these patients, one died after 15 months, and the other 9 are alive with evolutions between 8 and 31 months.

The aspects of the symptoms and their evolution as well as the renewal of their activities is discussed.

## PK. 151

## HYPOVENTILATION AND ARTERIAL HYPOXEMIA DURING HEMODIALYSIS

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To establish the mechanism of hypoxemia during hemodialysis we measured  $\dot{V}_E$ ,  $\dot{V}_{O_2}$ ,  $\dot{V}_{CO_2}$ ,  $\dot{V}_{CO_2}$  excreted through the dialysate ( $\dot{V}_{CO_2}$  dial), respiratory gas exchange (R),  $\dot{V}_A$ , dead space ( $\dot{V}_D/\dot{V}_T$ ) and arterial blood gases by standard methods. Mixed venous  $P_{CO_2}$  ( $P_{\bar{V}CO_2}$ ) by the rebreathing method. All measures were done before, after and at 15, 60 and 180 min. of dialysis in 6 patients of the chronic hemodialysis program of the hospital.

RESULTS	BEFORE	15min	60min	180min	AFTER
pH	7.31	7.32	7.34	7.39*	7.40*
PaCO2	27.7	28.1	27.9	26.1	27.8
PaO2	63.6	59.5	56.4*	60.6	65.8
PAO2	76.2	72.9	71.5*	74.9	73.8
D(A-a)	12.5	13.4	15.0	14.3	8.0
$\dot{V}_E$ , L/min	7.11	5.91	5.89*	6.49	7.37
$\dot{V}_A$ , L/min	5.25	4.51	4.20	4.90	5.60
$\dot{V}_{CO_2}$ ml/min	176	164	160	165	188
$\dot{V}_{CO_2}$ ml/min	149	127	118*	126	152
$\dot{V}_{CO_2}$ dial	-	27	25	32	-
R	0.87	0.78	0.73	0.76	0.81
$P_{\bar{V}CO_2}$	33.2	33.1	32.9	32.7	32.2

\*p &lt; 0.05

Comentary: 1-The statistically significant decrease in PaO2 during dialysis (60 min) was related with a decrease in  $\dot{V}_E$  and  $\dot{V}_A$  that lead to a decrease in  $\dot{V}_{CO_2}$  and PAO2 indicating that hypoxemia is produced by global hypoventilation. 2-The normal  $\dot{V}_D/\dot{V}_T$  rules out an abnormality of intrapulmonary distribution and the stability of D(A-a)CO2 indicates that there is no change in alveolo-capillary transport. 3-The normal PaCO2 and  $P_{\bar{V}CO_2}$  constitute an example of hypoventilation without increase in  $P_{CO_2}$ . 4-We were not able to demonstrate the cause of hypoventilation.  $P_{\bar{V}CO_2}$  did not change excluding a decrease in CO2 load. The correction of pH could be a factor but the return to normal of  $\dot{V}_E$  and  $\dot{V}_A$  after dialysis despite a normal pH indicates other mechanisms might be involved.

## PK. 152

RIGHT AND LEFT VENTRICULAR EJECTION FRACTION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN BOGOTA (ALTITUDE 2640 mts).

Szeinuk J., Murgueitio R., Escobar O., Pacheco D., Pabón J., Piñeros J., González V.  
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The purpose of this study was to evaluate the Radio-nuclide Angiocardiography in the assessment of Right and Left Ventricular Ejection Fraction (RVEF, LVEF) in 30 patients with Chronic Obstructive Pulmonary Disease (COPD). We found the technique useful and free of morbi-mortality among our patients. Although no significant correlation was found between RVEF and the pulmonary impairment, measured by pulmonary function tests and arterial blood gases, it diminished as the respiratory function became progressively impaired (RVEF:  $34.2 \pm 9.2\%$ ). Particularly in the group who had a Forced Expiratory Volume in the First Second (FEV1) less than 1 lts/sg and an arterial CO2 pressure more than 36 mmHg in Bogota, it was found high although non significant correlation between RVEF and FEV1 ( $r: 0.68, p > 0.1$ ) and between RVEF and arterial O2 pressure ( $r: 0.6, p > 0.1$ ). We also found that the RVEF was less in patients with Cor pulmonale ( $27.7 \pm 7.9$ ) than in the rest of the group ( $35.1 \pm 8.7, p > 0.1$ ). According with this, we suggest a RVEF of 27% as a clinical index of Cor pulmonale. In the group as a whole, no impairment of LVEF was found. Even in those patients whose ventilatory parameters were the worst, the LVEF was normal ( $56.4 \pm 13.6$ ). We support the use of the RVEF measured by Radionuclide Angiocardiography as an independent index in the assessment of the cardiopulmonary function in patients with COPD.

## PK. 153

RIGHT AND LEFT VENTRICULAR EJECTION FRACTION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN BOGOTA (ALTITUDE 2640 mts). A 1 YEAR FOLLOW UP STUDY.

Szeinuk J., Murgueitio R., Escobar O., Pacheco D., Pabón J., Piñeros C., González V.  
Servicios de Neumología y Medicina Nuclear, Departamento Médico, Hospital Militar Central, Bogotá.

We report a year follow up study of Right and Left Ventricular Ejection Fraction (RVEF, LVEF) measured by Radionuclide Angiocardiography in patients with Chronic Obstructive Pulmonary Disease (COPD) at 2640 mts over sea level.

Seven patients were studied, all of whom were receiving bronchodilators and intermittent oxygen therapy during the follow up. Their clinical condition was stable and without any evidence of pulmonary infection or cardiac failure at the time of the study. The following data were found:

	RVEF x±SD	LVEF x±SD	FEV1 x±SD
Basal	34.14±14.39	51.14±13.68	1±0.31
1 year	33.0 ±11.33	58.86± 8.88	0.9±0.25

FEV1: Forced Expiratory Volume in the First Second, lts/sg.

No significant variation was found in comparing the basal with follow up results. Also, we did not find any correlation between the change in FEV1 and the impairment of RVEF.

This is the first follow up study of RVEF in patients with COPD at this altitude. Our findings confirm the chronic nature of the disease and its slow but progressive impairment of the cardiopulmonary function.

## PK. 154

PROGNOSTIC DIAGNOSIS OF ACUTE CARBON MONOXIDE TOXICATION

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Most of the emergency patients of acute carbon monoxide toxication are stuporous, and their prompt prognostic evaluation is extremely difficult. Having in mind the possible development of prognostic diagnostic techniques, 22 patients of carbon monoxide toxication from a variety of etiologies were bled from the accessible arteries on their arrival at the emergency room, and gas analysis was immediately carried out on a pH/blood gas analyzer. Two of the 22 expired within 2 hr of arrival.

Mathematical analysis of the data revealed that the time required for the unconscious to return to lucidity was inversely proportional to the degree of base excess ( $T(\text{hr}) = -0.175 \times \text{B.E.} + 1.08$ ), and that lethality was seen when the arterial carbon dioxide exceeded certain levels of bicarbonate ( $\text{PaCO}_2 \geq 1.214 \times [\text{HCO}_3^-] + 15.88$ ).

These formula can easily be calculated, and yet be helpful for deliberate therapeutic strategy of patients suffering from carbon monoxide toxicity.

## PK. 155

STUDY OF ROLE OF INTRAVENOUS AND AEROSOL REPROTEROL IN PATIENTS OF BRONCHIAL ASTHMA AND CHRONIC ASTHMATIC BRONCHITIS.

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This study is based on the effects of intravenous Reproterol (beta-2 adenoceptor stimulant) and aerosol in 28 patients of Acute Bronchial asthma (ABA) and 13 patients of chronic asthmatic bronchitis (CAB).

In group I of 20 patients of ABA and CAB 90 microgram of intravenous Reproterol was given slowly. In Group II of 21 patients ABA & CAB 2 puffs of 500 microgram aerosol Reproterol was given. In group I FVC, FEV1 and FEV1 % were recorded before and after 5 minutes and one hour of intravenous Reproterol. In group II these were recorded before and after 5 minutes and 4 hours of aerosol Reproterol. In both groups blood urea, blood sugar serum bilirubin, SGOT, SGPT was estimated before and after intravenous and aerosol Reproterol.

All patients of both groups showed improvement in signs and symptoms with intravenous and aerosol Reproterol. Onset of action with the above dosage regimen was immediate. The duration of action was more than 1 hour with intravenous Reproterol and more than 4 hours with aerosol Reproterol. There was highly significant ( $p < .001$ ) improvement in pulmonary function tests in both groups. Side effects recorded were palpitation, tremors and retrosternal burning in few patients. The biochemical parameters remained within the normal range with intravenous and aerosol Reproterol.

It was concluded that intravenous Reproterol and aerosol Reproterol produce marked improvement clinically, have early onset and prolonged duration of action with minimum side effects.

## PK. 156

**OCCUPATIONAL HEALTH CONDITIONS IN CUCUNUBA'S COAL MINES**

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**OBJECTIVE:** Evaluating the health problem and other life conditions in the population who labors in the coal mines.

**Methodology:** Transversal description study based on the analysis of:

- Clinical charts (designed during the development of this investigation).
- Chest X-ray and Spirometry.
- Environmental measurements of CO<sub>2</sub>, O<sub>2</sub>, temperature, humidity, ventilation, determination of environmental dust and chemical analysis.
- Chemical analysis of silice.
- Social-economic survey

**Results:** The coal mining in the region studies has developed through rudimentary and handcraft methods.

The exploration is carried in absence of the most elementary hygiene and industrial security measures.

The mining population studied presented a high percentage of pneumoconiosis and low living conditions.

There are no governmental policies to attend this problem. We note very low social security affiliation.

## PL. 157

**LINEAL SCLERODERMA: A PROSPECTIVE AND COMPARATIVE STUDY OF THE USE OF COLCHICINE Vs D-PENICILAMINE IN TWENTY PATIENTS.**  
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Localized scleroderma(L.S.) is an inflammatory disease of unknown origin capable of compromising various tissue layers such as skin, subcutaneous cell tissue, muscles and even bones. Our group worked on twenty patients 15 female and five males- whose ages ranged from six to fifty five years. P. 24.2. The following tests were performed to all patients involved in the study: skin biopsies in all patients which were staining using H-E, collagen and trichromic; hemogram, globular sedimentation rate, reactive C protein, electrophoresis of proteins, dosage of immunoglobulins, C3, C4, Ch50, antinuclear antibodies, anti-DNA, Critidia lucillae, ant-SM, anti-RNP, anti-Centromero. X - Ray of long bones according to compromised limbs. X - Ray of face and cranium bones according to compromised area. We separated patients in two groups of ten individuals each. Group A was administered 1.5 mg. of colchicine a day while group B was given 250 mg. of D-penicilamine a day. Finally, five members of each groups were administered topically Dimethylsulfoxide at 50%. Lesions on patients were distributed as described: Left Hemiface (3), Right Hemiface (1) Left Hemineck (2), Right Hemineck (1). Right Thigh internal face (5). Left thigh(3). Thorax (4). Left leg (1). Right leg (1). Left forearm (2), Right arm (1). Chin (1). After an eighteen to twenty four months follow up period, we found no disease progress concerning signs; but there was a definite improvement in skin texture and hair growth though no moisture was present. Patients with signs of Positive FLEISCHMAJER showed very poor progress and no significant response to the treatment with Colchicine or D-Penicilamine. Only three patients presented positive Antinuclear Antibodies, while in a single female patient association with Osteopoiquiliae was detected. This fact led us to believe that the association Osteopoiquiliae- Melorreostosis with L.S. is fortuitous. It calls our attention the fact that the dermatological distribution of the disease matches the lines described by Blaschko in 1901.

## PL. 158

**ECHOCARDIOGRAPHY IN PATIENTS WITH RHEUMATOID ARTHRITIS.**  
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We studied 64 patients with Rheumatoid Arthritis (RA) classic or defined accord with the judgement of the ARA, that we were controlling in the external consultation of Rheumatology. We practice to them echocardiography modo M and bidimensional, electrocardiography(ECG) and radiography the thorax. We throwaway 14 patients their echocardiography presented a low diagnostic value, for this reason we made the analysis and decided finally on the remainder 50 cases that fill all the requirement of the protocol.

The results obtained were: 5 patients presented pericarditis (10%), valvular disturbance we found it in 9 patients (18%) which were prolapsus of the mitral in 4 cases(8%), sclerosis from the same valve in one case and the other 4 patients presented sclerosis in the aortic valve. The ventricular funtion was normal in all the patients, only 4 patients presented moderate dilatation of the left ventricle. The ECG were abnormal in 6 patients they presented changes of ancient necrosis, the others were considered like normal.

The finding obtained in this study are accord with the different publications where they report until 10% of pericarditis in population affected with RA. We found valvular alterations in a 18% of our patients; the ventricular dilatation concerned to hypertense patients with studies ECG abnormal for ancient necrosis but without another alteration echocardiography attributed to the rheumatic disease. The clinic, the radiological studies and the ECG don't detect the signs of pericarditis. For these reason it would be necessary practice periodically echocardiographic studies to the patients affected with RA classic or defined in order to have a more exact knowledge of their extra-articular manifestations because the pericarditis in many cases evolves without any signals and symptomatology.

## PL. 159

**RHEUMATOID ARTHRITIS.-FUNCTIONAL PULMONARY STUDY.**  
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We studied 61 patients they were checking in the external consultation of Rheumatology, they had a diagnostic of Rheumatoid Arthritis (RA) classic or defined accord with the judgement of ARA, which in the Neumology service were practiced the following checks: vital capacity(VC), expiratory forced volume in the 1''/vital capacity(FEV 1), FEV 25-75, FEV 75-85, MEF 50, MEF 75, Peak Flow(PF), total pulmonary capacity(TLC), residual volume(RV), diffusion capacity(DCO). Those checks were carrying out in an equip Hewlett Packard 47120 a pulmonary system desk, the R.V. was measured with helio in a Jaeger check, we apply to the result obtained the estadistic of check (test) to group datum obtaining the variance, mean, standard deviation and the coefficient of variation.

VC presented a normality=95.08%, FEV 1 477.04%, PF=62.29%, FEV 25-75=39.34%, FEV 75-85=37.71%, MEF 50=45.91%, MEF 75=14.76%, TLC=98.37%, RV/TLC=39.34%, RV=32.79%, DCO=93.44%. Functionally 5 patients had all the checks normal, 55 cases were obstructive and 1 restrictive, in 44 patients the radiological study from the thorax were normal, 16 with secondary changes a obstructive lung disease and 1 with fibrosis.

For the preceding finding we conclude: all the patients had RA classic or defined. From 55 cases with obstructive pulmonary affection in 33 of these patients we can take the RA as motive or their antecedents of tabacconist, occupational or atopies, for the 22 patologic cases there isn't explication different to the RA. Physical examination and radiological test are not help for a precocius diagnostic of the obstruction. The possibility to utilize these functional pulmonary test like an implement in the evolution and treatment of the RA it would make it necessary carry out the test (check) with some periodicity with this we could know if there is a secondary progressive alteration the RA.

## PL. 160

TREATMENT OF REFRACTORY RHEUMATOID ARTHRITIS. EXPERIENCE WITH THE USE OF THALIDOMIDE.  
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Seventeen patients (16 women, 1 man) with refractory rheumatoid arthritis were treated with thalidomide. Two of them abandoned the study in the first 6 weeks. Thirteen received an average of  $531 \pm 63$  mg/day of thalidomide during  $18.8 \pm 8.8$  weeks; two took 300 mg/day during 62 and 65 weeks. Twelve patients showed complete symptomatic remission, one partial remission and there was no improvement in two. The erythrocyte sedimentation rate became normal in 5 patients and decreased in 10. The rheumatoid factor, positive in 14 patients, became negative in 3, lessened titers in 10 and remained unchanged in one. The duration of remissions were 4 years in one patient, 2 years in 3 patients, 1 year in one, and varied between 8 months and 8 weeks in seven. Five patients received a second course of treatment and attained remission again. This lasted 24, 10 and 9 months in three of them; the other two are receiving 100 mg/day of thalidomide as a maintenance dose and remain asymptomatic after 14 and 8 months. The side effects were: drowsiness, constipation, hard swelling of the lower limbs, erythema of the face and limbs with local pruritus or burning sensation, hair loss, cough, nasal obstruction, fever, and skin and mucosal dryness. In 8 patients there was a mild eosinophilia (<10%) and in 2 leukopenia. A 33 year old woman showed amenorrhea up to two months after stopping treatment. After a second course of treatment, two patients showed peripheral sensory neuropathy. Though the mechanism of action of thalidomide has not been completely established, experimentally it has shown to have antiinflammatory and immuno-suppressive activities.

## PL. 162

## SJÖGREN SYNDROME: AN EXPANSION ENTITY ?

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The Sjögren Syndrome (SS) in absence of identifiable illness is consider as primary; it is an entity most often each time. We have evaluated in intentionated way the SS incidence on: Fibromyalgia (FM), Carpal Tunnel Syndrome (CTS), Chronic Atrophic Gastritis (CAG), Enthesopathy (E) and "benign" Raynaud's Syndrome (RS). Examined 37 patients with SS, which 71 had primary SS, between July 1983 and January 1986. The evaluation included Ophthalmologic examination, minor salivary glands biopsy and/or Sialography, hematic chart, erythro-sedimentation rate, rheumatoid factor, immunoglobulins, reactive C protein and radiography of sacroiliac joints and calcaneum bone at symptomatic patients.

We reproduce past items about SS incidence on CTS (36.6%) and "benign" RS (19.9%).

We demonstrate by first time the high incidence of SS on: FM (33.02%), E (21.12%) and CAG (100%).

We propose according to subjective and sometimes subclinic nature of SS symptoms, this one should be search in the enunciated entities.

## PL. 161

## MYOFASCIAL PAIN SYNDROMES

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The Myofascial Pain Syndromes (MPS) form part of the muscle skeletal apparatus diseases, known as Rheumatism Nonarticular and constitute one of the most often causes requiring a close doctor's surveillance, and originating patient's often working absenteeism, due to the acute pain and functional deficit that he/she suffers. In order to determine in our own medium which are the most frequent MPS, their characteristics, evidence of occurrence (either chronic or severe), prevalence according to patient's age, relationship with his/her routine occupation, etc. a thorough Clinical Research was conducted with 100 subjects, closely controlled over a period of the last three years. For diagnosis, the following criteria were taken into account: 1) Exquisite, focal tenderness to digital pressure (the Trigger Point) in the band of taut muscle fiber. 2) A local twitch response elicited through snapping palpation of the tender spot (T.P.). 3) The reproduction of the patient's pain complaint by pressure ing on the tender spot (T.P.)

Revealing Observations: A 93% of the Research subjects were women, and the decades most affected were as follows: 3rd with a 11% - 4th with a 16% - 5th with a 26% - 6th with a 29%. A chronic occurrence was found on a 94% of the cases. An unilateral muscle lesion was found on a 92% of the cases. The Levator Scapulae Muscle was the most severe affected, reaching a 49% figure. On this scale, the Upper Trapezius Fiber got the second place with a 38%. The Piriformis Muscle reached a figure of 8%. The Pectoralis Major Muscle came next with a 4%. Conclusions: We concluded that the MPS of the Levator Scapulae Muscle and the Upper Trapezius Fiber are the most drastically affected in our casuistical clinical research, and that those women with a very sedentary life, (whose muscles are disused), were detected as the worst overtaken by this disorder.

## PL. 163

## ANTINUCLEAR ANTIBODIES IN JUVENILE ARTHRITIS THE HEP-2 CELL SUBSTRATE

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The presence of antinuclear antibodies (ANA), rheumatoid factor (RF), and immune complexes in the sera of patients with Juvenile rheumatoid arthritis suggests that immunologic mechanisms play a role in its pathogenesis. Several investigators have previously studied ANA in JRA patients using various substrates such as human leukocytes, mouse liver, and mouse kidney. There is only one report using the HEP-2 cell substrate which seems to be a more sensitive substrate for detecting ANA.

Antinuclear antibodies (ANA) were determined in 41 patients with juvenile arthritis using the HEP-2 cell substrate. Control sera tested included 30 healthy children and 43 adult RA patients.

Titers of 1:40 with 2+ or greater staining were considered positive. These children were classified into 3 subgroups by the type of disease at onset. There were 21 in the polyarticular onset group, 14 in the pauciarthritic onset group, and 6 in the systemic onset group. It is striking that none of our patients had iridocyclitis. Of the 30 children we used as control none had positive ANA. 49% of the adult RA had positive ANA.

Positive ANA were found in 28 patients (68%): 13 patients had homogeneous pattern, 11 had fine speckled, 1 nuclear, 1 cytoplasmic and 2 with two different patterns. The use of the HEP-2 cell substrate resulted in high frequency of positive ANA in JA (68%). The homogeneous and speckled patterns occurred most commonly.

## PL. 164

Electrocardiographic (ECG) alterations in the different kinds of Systemic Sclerosis (SSc).

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144 patients of SSc were divided into the following subgroup on the basis of the extension of the skin sclerosis, according to our classification: "sclerosis sine scleroderma (SSsS)" (10 pts); "sclerodactily (SD)" (18 pts); "acroscclerosis stricto sensu (ASS)", in which sclerosis involves the hands, face, forearms, neck, the upper thorax feet and legs (68 pts); "chronic diffuse scleroderma (CDS)" where the skin of lower thorax and/or abdomen, arms, or thighs is involved also (43 pts); "acute diffuse scleroderma (ADS)" early sclerosis on the trunk and possible diffusion on the face and the limbs (5 pts). The ECG alterations of each subgroup were compared to those of Rheumatoid Arthritis patients, matched for sex and age. In the CDS significant differences were found for the following alterations: ventricular premature beats ( $p < 0.005$ ), pulmonary P wave ( $p < 0.005$ ), incomplete right bundle branch block ( $p < 0.05$ ), complete right bundle branch block ( $p < 0.005$ ), bifascicular block formed by complete right bundle branch block plus left anterior fascicular block ( $p < 0.05$ ) and ST-T changes ( $p < 0.005$ ). In the ASS significant ECG alteration was only the pulmonary P wave. In the SD and SSsS no significant difference was found. In the ADS the frequency of the ECG alteration was high but perhaps because of the small number of cases it didn't result significant. Our results suggest that the ECG alterations are higher in patients with more diffuse skin sclerosis.

## PL. 165

NEUROPSYCHIATRIC MANIFESTATION OF SYSTEMIC LUPUS ERYTHEMATOSUS.

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The clinical records of 62 patients with systemic lupus erythematosus treated between 1962 and 1985 were studied. 45% of the patients had neuropsychiatric manifestations. These manifestations were grouped according to syndromes: - psychosis and mental disorders. Hemiparesis. Paraparesis. - Alteration of cranial nerves. Alteration of peripheral nerves. Seizures. All of the patients with neuropsychiatric manifestations also had other manifestations of the disease, specially nephropathy. An analysis was made of the evolution of these patients and the profile of the laboratory examinations, including pathological anatomy. The prognosis of the patients who had nervous system alterations was worse than in those with an unaffected nervous system, but in none of the cases could death be attributed to the neurological affection. It was found that the dosis of corticosteroids and other immunosuppressors used in the treatment of neuropsychiatric manifestations were superior to the dosis habitually used in the treatment of this disease without this type of manifestation, and recovery was generally found to be satisfactory.

## PJ. 133A

GASTRIC TOXICITY IN THE ELDERLY AFTER NSAIDs THERAPY  
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+ Institute of Clinical Medicine-Cagliari; ++ S. Camillo Hospital-Rome; +++ Institute of Rheumatology-Rome.

Adverse drug reactions are a frequent and serious problem, mainly in the elderly. Therefore it has been examined the frequency of gastric toxicity after use of NSAIDs in rheumatic elder patients.

250 outpatients, 180 females and 70 males, have been studied: 1) 110 with various rheumatic diseases aged  $> 60$  years; 2) 140 rheumatic controls aged  $< 55$  years. All patients have been followed monthly from 1 to 4 years. Clinical and anamnestic check-up and, if necessary, endoscopy or x-ray of gastrointestinal tract were performed. Besides these parameters, sex, length of therapy, use of other anti-rheumatic drugs (a.r.d.) were also evaluated. Statistical analysis has been made by chi-square test.

12,7% of elders and 15,7% of controls had gastric toxicity ( $p = n.s.$ ). Long-term therapy caused gastric side-effects in 26,1% of elders and 28,4% of controls, while short-term therapy was not tolerated in 3,1% of elders and 5,5% of controls. The difference between short- and long-term therapy groups was significant ( $p = 0.01$ ), but not between elders and controls. Both groups of patients had a significant increase of gastric toxicity when multiple a.r.d. were administered. No difference in other parameters evaluated has been found.

Against any expectation elder patients did not show more gastric side-effects than controls. No difference between sexes was observed. The gastric tolerance appears to be impaired mainly by length of therapy and combination of treatment with other a.r.d.. In all cases but one (requiring interruption) the treatment was well tolerated and minor side-effects improved after symptomatic therapy.