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DEPARTAMENTO DE ANESTESIOLOGÍA Y REANIMACIÓN

NEUROSCIENCE 2012 – NEW ORLEANS, USA

EYE MOVEMENTS DURING FREE VISUAL EXPLORATION OF NATURAL IMAGES IN PERSONS AFFECTED WITH SCHIZOPHRENIA.

R. Mayol, J. Egaña, C. Devia, P E. Maldonado

Most documented motor abnormalities in schizophrenia relate to oculomotor deficits. An important amount of evidence reveals that patients exhibit several atypical eye movement patterns, where the number and length of fixations or saccades are altered. Nevertheless most of these results have been obtained in artificial environments using nonnatural stimuli or restraining spontaneous image exploration. Moreover, this approach limits knowledge about visual behavior in schizophrenic patients because forced situations may engage additional neuronal mechanisms that will appear as confounding factors. Our aim is to study eye movements in schizophrenic patients and compare them against healthy controls, using a more ecological approach that includes free visual exploration of natural images, which offer less controlled situations that more precisely mimics everyday life. In particular we are testing for this disease's biomarkers by exploring the eye movements during unrestricted experimental paradigms. We hypothesized that differences between patients and control subjects are also present during natural scene explorations and that it is possible to identify distinctive patterns of oculomotor activity that could be tested as biomarkers of this disease. Six subjects diagnosed with schizophrenia, and 5 matching controls, were instructed to freely view a monitor displaying 7 categories of natural images, including landscapes, fractals, constructions, white and pink noise images, and black or gray images. High frequency cameras (EyeLink II, SR research) recorded eye movements, while the number and length of saccades and fixations was computed off line. We found that patients and control groups did not differ in total fixation lengths. However, the distribution of saccades length was significantly different between groups. When examined by stimulus category, saccades lengths discriminated better between schizophrenic subjects and controls because their distributions differ for all 7 categories while fixations lengths did so only for the grey images category. Overall, we showed that, utilizing this more ecological approach, saccades lengths appears to be an appropriate parameter to discriminate between these populations. Future research may help evaluate saccades lengths in free visual exploration as a potential biomarker for this disease.

DEPARTAMENTO DE MEDICINA

3RD INTERNATIONAL CONGRESS ON ABDOMINAL OBESITY - QUEBEC, CANADÁ

EVALUATION OF BDNF EXPRESSION IN LIVER, VISCERAL AND SUBCUTANEOUS FAT FROM OBESE SUBJECTS, BY IMMUNOHISTOCHEMISTRY.

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BDNF neurotrophin can act on nonneuronal cells. There are evidences of its role in metabolic actions. Objective: To evaluate by immunohistochemistry technique, the expression of BDNF in liver, subcutaneous (SF) and visceral fat (VF) of non-diabetic obese and control subjects. Patients and methods: 15 subjects with BMI \geq 30 kg/m² and < 26 kg/m² who underwent abdominal surgery were selected. A fasting blood sample was taken for measurement of glucose, insulin and lipid profile. A liver, subcutaneous and omental fat biopsy was obtained for immunohistochemistry evaluation of BDNF protein expression levels. To quantify its expression in histological sections, we used the software Image-Pro Plus 6.2. A p value < 0.05 was considered statistically significant. Results: Ten obese subjects (8F/2M), age: 37.7 \pm 13.6 years, BMI: 33 \pm 2.7 kg/m² and 5 female control subjects, age 44.4 \pm 3.8 years, BMI: 22.9 \pm 2.2 kg/m², were evaluated. BMI, waist circumference, fasting insulin, HOMA and LDL cholesterol were significantly higher in the obese group (p=0,005). The expression of BDNF in VF was higher than in SF in both groups (p< 0.005). In obese subjects, BDNF expression in liver tissue was higher than in controls (p=0.0094). There were no differences between groups in the expression of BDNF in SF or VF. Liver steatosis was found in obese subjects. Conclusions: The increased expression of BDNF protein in visceral fat could be associated with local metabolic process. In obese subjects, the increased BDNF liver expression probably is related with insulin resistance and fatty liver disease.

18° INTERNATIONAL LIVER TRANSPLANTATION SOCIETY - SAN FRANCISCO, USA

SURVIVAL IN PATIENTS UNDERGOING ORTHOTOPIC LIVER TRANSPLANTATION AT THE HOSPITAL CLINIC, UNIVERSITY OF CHILE.

Juan Pablo Miranda, Danny Oksenberg, Jaime Poniachik, Jorge Cordero, José Ibarra, Esteban Villagra, Angélica Bórquez, Jaime Castillo, Gonzalo Cardemil, Juan Carlos Díaz.

Introduction: Orthotopic liver transplantation (OLT) has become an effective procedure for patients with advanced liver disease, reporting a survival rate between 70% - 80% at 36 months. In our country there are few publications in relation to graft survival in OLT. Aim: To evaluate the survival post OLT at the Hospital Clinic, University of Chile. Material and Methods: A retrospective study of demographic and clinical variables of patients undergoing OLT at the Hospital Clínico Universidad de Chile, by creating a standardized database and subsequent application of survival analysis and a model Cox proportional hazards Results: We evaluated 134 OLT performed during the period 2002-2011, there was a 55.8% male patients, mean age was 53.8 \pm 10.6 (21-68) years, median graft survival time of 38.9 months. The use of cyclosporine compared to tacrolimus as primary immunosuppressant was associated with an increased prevalence of infections (23.0% v/s 8%) and moderate and severe graft rejections (17% v/s 9%), p <0.0001. It adjusted a risk function that showed the higher risk profile for graft failure corresponds to patients with a pre-OLT MELD score \geq 28 points, HR 4.5 (2.0 - 14.2). Conclusions: Immunosuppression based in Tacrolimus is the better treatment than cyclosporine and the main risk factor for graft loss are patients with a score pre-OLT MELD as much or more than 28 points.

IMMUNOSUPPRESSION AND MORTALITY RISK FACTORS ASSOCIATED IN LIVER TRANSPLANTATION CHILEAN PATIENTS.

Juan Pablo Miranda, Jaime Poniachik, Danny Oksenberg, Jorge Cordero, José Ibarra, Esteban Villagra, Angélica Bórquez, Jaime Castillo, Gonzalo Cardemil, Juan Carlos Díaz.

Introduction: Orthotopic liver transplantation (OLT) has become an effective procedure for patients with advanced liver disease, In our country there are not publications in relation the risk factors involved in graft survival in OLT. Aim: To evaluate the immunosuppression risk factor involved in graft survival in OLT at the Hospital Clinic, University of Chile. Methods: From 2002 to 2011, 134 liver transplantation from cadaveric donors were performed at the Hospital Clínico Universidad de Chile. One hundred thirty one (98%) received CsA-me or generic tacrolimus (T-Inmun®) as primary immunosuppression. We evaluated clinical variables, risk factors and the survival of these patients. Results: 48.5% (65) received CsA-me and 49.3%(66) received Tac. Median age was 53.8 \pm 10.6 (21-68) years, not differences for sex. Causes for transplantation in CsA-me group was HCV 35%; alcoholic cirrhosis 15%; NASH 14%; cryptogenic cirrhosis 12%; other 24% and in the Tac group: NASH 27%; alcoholic cirrhosis 17%; autoimmune hepatitis 17%, cryptogenic cirrhosis 15%; and other 24% (p=ns). Patient Survival analysis of group CsA-me were 71%, 59% and 50% at 1,3 and 5 year, respectively, on group Tac were 92%, 89% and 87% respectively (log rank p<0.0001) The risk factor associated to mortality

was hematocrit and hemoglobindifference between the time of registration on the waiting list and pre-OLT of 2 % points and 0.8 g/dl, HR 2.7 (1.2 - 3.1) and 2.7 (1.4 - 3.5) respectively. The infections (23.0% v/s 8%) and moderate and severe graft rejections (17% v/s 9%) were more frequent at CsA-me group ($p < 0.0001$). No Differences in acute kidney failure and de-novo insulin-requiring diabetes mellitus were seen. Conclusion: The hematocrit and hemoglobin difference between the time of registration on the waiting list and pre-OLT was a risk factor associated to mortality. Tac has superior to CsA-me in improving survival (patient and graft) and preventing acute rejection in OLT.

SURVIVAL ANALYSIS AFTER LIVER TRANSPLANTATION IN CHILEAN PATIENTS RECEIVING CYCLOSPORINE OR GENERIC TACROLIMUS AS PRIMARY IMMUNOSUPPRESSION. PRELIMINARY ANALYSIS.

Sylvia Márquez, Juan Pablo Miranda

Background: Cyclosporine or tacrolimus are widely used as primary immunosuppression to prevent rejection in liver transplant recipients. Both are calcineurin inhibitors but with different immunosuppression potency and some differences in their secondary effect profile. In Chilean liver transplantation patients, the implications of these differences are not assessed. Aim: We evaluated results and survival from a prospective trial that compared cyclosporine microemulsion (CsA-me) and Tacrolimus (Tac) for primary immunosuppression. Methods: From 1995 to October 2011, 23 liver transplantation from cadaveric donors were treated in the Hospital Barros Luco. Twenty one (91,3%) received original CsA-me (Neoral®) or generic tacrolimus (T-Inmun®) as primary immunosuppression. We studied demographic and clinical variables. Results: 16 (69.6%) patients receiving CsA-me and 5 (21.7%) received Tac. Median age was 52 years. Causes for transplantation in CsA-me group was: HCV 25%; alcoholic cirrhosis 12.5%; autoimmune hepatitis 12.5%, other 50% Tac group was: autoimmune hepatitis 40%; NASH 20%, alcoholic cirrhosis 20% and FHF 20%. At survival analysis group CsA-me presented 1 and 5 year patient survival were respectively 100% and 93.6%, on group Tac were 100% and 100% respectively (log rank test $p = ns$). Conclusion: In the Chilean population generic tacrolimus would not inferior to cyclosporine microemulsion at graft survival, further study is necessary to find definitive conclusions.

JOINT INTERNATIONAL NEUROGASTROENTEROLOGY AND MOTILITY MEETING - BOLONIA, ITALIA GASTROINTESTINAL MOTILITY INVOLVEMENT OF SYSTEMIC SCLEROSIS IN CHILEAN PATIENTS.

Ana Maria Madrid, Lilian Soto, Glauben Landskron, Claudia Defilippi, Miguel Cuchacovic, Carlos Defilippi

Objective: To characterize the gastrointestinal motility involvement in Chilean patients fulfilling ARA diagnostic criteria for systemic sclerosis (SSc). Methods: An esophageal manometry, surface electrogastrography, intestinal manometry, and lactulose H₂ breath test were performed to 30 SSc patients, mean age 52.7 yo (21 - 73 yo), 28 female, mean onset 5.8 ± 6.6 y, mean Rodnan score 12.3 ± 8.7 . Nine patients presented diffuse SSc (dSSc) and 21 had limited SSc (lSSc). Predominant symptoms (dysphagia, nausea, vomiting, abdominal pain and distension, diarrhea, and constipation) were registered using a VAS score. Results: Impaired esophageal motility was found in 80% of patients, mostly with hypotensive peristalsis and reduced lower esophageal sphincter pressure (11.9 ± 1.3 mmHg). Only 30% of patients had gastric involvement, mainly bradigastric and low power ratio. The intestinal motility was impaired in 80% of SSc patients, 54% of them with myopathic involvement, 37.5% with mixed pattern (neuromyopathic), and only 8,3% with neuropathic intestinal motility. Orocecal transit time assessed by lactulose breath test was delayed in 30% of SSc patients and 53.3% had small intestinal bacterial overgrowth. The most frequent symptoms in these patients were heartburn (76%), abdominal distension (70%), and dysphagia (63.3%). Comparing dSSc with lSSc patients, we found that dSSc had lower distal esophageal body pressure (25.1 ± 13.6 mmHg versus 48.6 ± 12.1 mmHg*), and a more impaired intestinal motility (with lower amplitude and frequency of MMC's phase II and III*). Orocecal transit time was more delayed in dSSc compared to lSSc (112.5 ± 27.1 min. versus 89.5 ± 20.4 min.*), also dSSc patients reported more severe dysphagia and vomiting*. There were no differences in electrogastrography measures, small intestinal bacterial overgrowth, and the rest of symptoms between these two clinical presentations of SSc. (* $p < 0.05$). Conclusion: Gastrointestinal motility involvement of systemic sclerosis in Chilean patients is very common, being more severe in diffuse SSc and mostly impairing esophagus and small intestine. This highlights the role of early diagnosis in these patients in order to protect as much as possible, the gastrointestinal tract of microvasculopathy and fibrosis.

SMALL BOWEL MOTILITY DISORDERS IN VAGOTOMIZED PATIENTS.

Ana Maria Madrid, Sergio Ledesma, Glauben Landskron, Rodrigo Wolff, Verónica Leon, Juan Pablo Miranda, Carlos Defilippi

Objective: The role of the vagus nerve in initiation and coordination of intestinal motility remains controversial. After a vagotomy, is described a lower and more disorganized activity of the migrating motor complex (MMC). Aim: To evaluate the presence of abnormal intestinal motility in vagotomized patients. Methods: We studied the small intestinal motility of 22 symptomatic vagotomized patients, mean age 48 years (range 28-76); 17 female, compared to 20 healthy subjects, mean age 38 years (range 22-58); 12

female. Intestinal motility was assessed by perfused catheters and external transducers with standardized technique during 309 ± 47 minutes and 279 ± 49 minutes in patients and healthy subjects, respectively. The cyclic activity (CA), duration of MMC, duration of MMC's phases, amplitude and frequency of contractions in phase II and III, intestinal motility score (IMS) and clustered contractions were evaluated. The referral for consultation was chronic diarrhea in 10 patients, constipation in 4, abdominal pain in 3, gastroesophageal reflux in 3, intestinal pseudoobstruction in 3 and 2 patients with gastric retention syndrome. History of total or partial gastrectomy plus vagotomy was found in 12 patients. Statistical analysis was assessed using t-test and Kruskal-Wallis. Results: From the patients group, 9 did not showed a phase III during the entire study, whereas all from the control group had cyclical activity. The presence of clustered contractions was pathological (> 4 per hour) in 4 patients and none in the control group (0.036). There were no differences between gastrectomized and non gastromized patients. Conclusion: Vagotomized patients with digestive symptoms show severe small intestinal motor disorders. The most frequent symptom after vagotomy was chronic diarrhea. The presence of gastrectomy did not increase the severity of the intestinal motor disorder. The absence of cyclical activity found in almost one third of the patients and the differences in intestinal motility, suggest a neuropathic pattern. However, studies with a greater number of patients are needed.

XXXI WORLD CONGRESS OF INTERNAL MEDICINE – SANTIAGO, CHILE

CARCINOID NEUROENDOCRINE TUMOR TREATMENT WITH RADIONUCLIDES. CASE REPORT.

R. Collado, J. Carmona, P. Zhindon, P. González.

Introduction: Neuroendocrine tumors (NETs) gastroenteropancreatic represent about 2% of all gastrointestinal tumors. It has an incidence of 2.5-5 cases per 100,000 per year. The term carcinoid refers to tumors that originate in ileal enterochromaffin cells produce serotonin which have better prognosis than adenocarcinomas. Description: Male patient, 55 years old. History of hypertension treatment. Mother dies of intestinal NET. During routine monitoring is performed renal Doppler ultrasound scan where hepatic nodule screening solid hypervascularized right. MRI is requested and displayed multiple hypervascular liver lesions, suggestive of secondary lesions. During gastroenterology Control refers colicky abdominal pain, diarrhea without pathological elements and episodes of flushing objectified during the interview. Discussion: It is proposed as a likely diagnosis NET carcinoid with liver metastases and carcinoid syndrome. Requested PET/CT 68Ga which concludes as primary carcinoid tumor of small bowel loop, possibly ileum, mesenteric and hepatic secondary locations. A year later he performed echocardiography in highlighting mild pulmonary hypertension, tricuspid reflux mild and moderate pulmonary reflux with good LV systolic function. Again requested PET/CT 68Ga which highlights frank progression from prior examination also adding another commitment to small bowel loop in the right iliac fossa. The patient repeatedly refuses to undergo surgery or biopsy and Nuclear Medicine is derived which decides sequential therapy with radionuclides. After 3 sessions, we conclude from the systemic tracking of each meeting, that: no evidence of disease progression with a partial response and decreased tumor tissue somatostatin receptor positive, and no evidence of spread to other locations (not there is uptake in the chest or heart area which is ruled by metastases in this area and endocardial damage would be given by mediators). During last session is requested echocardiography (7 months after the first) that displays and nonspecific diffuse involvement of predominantly right valve with moderate pulmonary regurgitation, mild tricuspid stenosis and severe insufficiency, severe dilated right atrium and inferior vena cava, septal hypertrophy mild, mild dilation of aortic root and right atrium with preserved LV systolic function, which does not correlate with the relative good functionality of the patient. This case illustrates that in NET radionuclide therapy is effective in decreasing the progression of disease, and also demonstrates the rapid and severe endocardial commitment typical of advanced stages of this disorder.

LEFT MAIN CORONARY TRUNK ORIGINATED IN PULMONARY ARTERY IN AN ADULT. CASE REPORT.

H. Ugalde, M Muñoz, D. Ugalde, S. García, E. Farias

Introduction: Coronary arteries origin anomalies are detected in 0.5 – 1.5% of all angiographies; in Chile the most frequent is anomalous origin of right coronary artery from left coronary sinus. Anomalous origin of the left main trunk is the most rare and its origin from pulmonary artery in adults is exceptional, usually because it's not compatible with reaching adult age. This is the first reported case of this anomaly in an adult patient in our country. Description: An 49 years old female, chronic smoker, dislipidemic, that presented with 2 months history of typical non progressive angina. The physical exam was normal as electrocardiography and echocardiography, exercise electrocardiogram suggested ischemia. Reinterrogation revealed moderated efforts dyspnea from young age without any study. Coronary angiography was performed, it showed absence of the left main trunk in the left coronary sinus, dilated right coronary artery, with no lesions and extensive collateral circulation to anterior descending and circumflex arteries, with inverted flow left main trunk draining to the pulmonary artery. Left ventricle was mildly dilated with middle and apical anterior hypokinesia, global systolic function was conserved. Surgical correction was

decided occluding left main anomalous origin and performing coronary artery bypass grafting from left internal thoracic artery. The patient is discharged with no complications, at 2 years follow-up she is symptom free and has a normal physical capacity. Discussion: The described anomaly is an exceptional finding and its presentation in adulthood is even more rare, this particular case illustrates a apparently late clinical manifestation but the patient referred mild symptoms from childhood. The diagnosis of this coronary anomaly can be made with less invasive means such as CT angiography but confirmation requires coronary artery angiography and treatment is always surgical, with good outcome.

MEDIASTINIC FIBROSIS AS AN ATYPIC PRESENTATION OF SILICOSIS.

L. Toro, D. Sanhueza, M. Ruiz

Introduction: Silicosis is a respiratory disease, secondary to chronic silica inhalation. It is most frequently seen in miners, glass and ceramic workers. It is generally presented as respiratory symptoms of progressive installation. Although, there are atypical presentations such as mediastinic fibrosis, that mimics other etiologies such as lung cancer and tuberculosis, as exposed in this case. Description: A 57-year old male, bus driver, who worked as miner for 27 years. He had a history of hypertension, gout and chronic tobacco smoking (13 pack years), previously asymptomatic. He developed acute retrosternal thoracic pain, associated to palpitations and sweats. He was evaluated in the Emergency Room, an EKG was developed which did not show ischemia or other alterations. Cardiac enzymes were in normal ranges with no evolutionary changes. Chest X-ray was within normal ranges. Thorax CT was negative for pulmonary embolism and acute aortic syndrome; it showed mediastinic lymph nodes, a pulmonary nodule of 1.5 cm in left lower bronchial bifurcation and several pulmonary nodules up to 6 mm without calcifications. Bone scintigraphy, head CT, abdominal and pelvis CT were within normal ranges. Fibrobronchoscopy showed an extrinsic bronchial compression at the bifurcation of upper and lower left bronchi. PPD and ELISPOT TB test were negatives. A videothoracoscopy biopsy was performed that showed lymph nodes and lung tissue with dense sclerosis foci associated to fine crystal deposits, with no evidence of granulomas or neoplastic cells, compatible with lung and ganglionic silicosis. Ziehl-Neelsen stain and Koch culture negatives. Thorax MRI showed subcarinal mediastinic and left hilar mass, plus mediastinic fibrosis. Final diagnosis: Mediastinic fibrosis secondary to Silicosis. Therapy with Prednisone was initiated, evolving with reduction of pain and respiratory symptoms. He was discharged in good conditions, with ambulatory follow up with Pulmonology Physician. 1 year after this hospitalization, the patient had evolved in good conditions, asymptomatic, ELISPOT TB persistently negative, with a significant reduction of lung images in Thorax CT. Discussion: Silicosis is a disease which has many presentations, as seen in this case report. Because its treatment demands to remove silica exposure and use of systemic glucocorticoids, an early diagnosis is mandatory. This entity should be considered in differential diagnosis of cardiorespiratory symptoms, especially in patients with risk factors for Silicosis, where main causes have been excluded.

CONGESTIVE HEPATOPATHY AS PRESENTATION OF CONSTRICTIVE PERICARDITIS. CASE REPORT.

D. Ugalde, M. Muñoz, M. Cereceda, H. Ugalde

Introduction and Description: Constrictive pericarditis is an infrequent disease, it has classical hemodynamic characteristics and physical exam findings. In some cases congestive hepatopathy can be its initial manifestation. We report the case of a previously healthy 27 year old male that presented with 6 weeks history of weight loss, dyspnea, peripheral edema and increased abdominal volume. Cirrhosis was suspected. He was admitted to our hospital for study. The patient had clinical ascites, and jugular venous distension. He had mildly elevated alkaline phosphatase and gamma glutamyl transferase. Cardiac cause for hepatic compromise was suspected on clinical basis. Diuretics were started and hepatic MRI done, suggesting secondary congestion, echocardiography detected diastolic dysfunction and moderate to severe pulmonary hypertension. Thorax CT showed no signs of pulmonary embolism and auto-antibodies were negative. Cardiac MRI showed pericardial thickening. Cardiac catheterization was done and revealed equalization of pressure between right and left chambers, and right ventricle curve showed abrupt decrement and subsequent plateau, the "square root" sign, confirming constrictive pericarditis. Pericardiectomy was performed and patient evolved with total recovery, remaining asymptomatic in follow up. Pathology was not specific and tissue cultures were negative. Discussion: This case underscore the need to consider cardiac diseases as a possible cause for hepatic compromise, that is caused by the elevated hepatic sinusoid pressure, accumulation of deoxygenated blood therefore producing atrophy, fibrosis and necrosis. Clinically the heart failure predominates and prognosis of congestive hepatopathy depends on the heart disease. Constrictive pericarditis is caused by pericardial thickening and fibrosis, as a consequence of inflammation of any cause. Chambers become confined and pressure equalization occur, precocious diastolic filling is early and causes the square root sign, cardiac output is reduced and venous pressure increases, impacting liver as described. Physical exam may present as findings pericardial knock, jugular venous distention and kussmaul sign. Electrocardiography is not specific; echocardiography can suggest the disease. Cardiac MRI can

visualize pericardial thickening in detail and to confirm the diagnosis cardiac chamber pressures measurement are used as in this case. Surgical management with pericardiectomy resolves chamber confinement restoring normal function. It is relevant to consider a broader diagnosis and a detailed history and physical exam remains as key elements, with adequate use of imaging and invasive procedures to gain diagnostic precision.

TREPONEMA PALLIDUM AND HEPATITIS B CO – INFECTIONS IN HIV PATIENTS RECENTLY DIAGNOSED.

L. Pizarro Chamorro, C. Gallardo Araneda, E. Cortés Sedano

Objectives: Treponema Pallidum and Hepatitis B share transmission routes and can facilitate infection by HIV. This study aims to determine the prevalence of current or past infection with Treponema Pallidum or Hepatitis B in HIV patients diagnosed at a University Hospital. Material and methods: Medical records of HIV patients diagnosed and controlled in the Hospital Clínico de la Universidad de Chile between 1997 and 2011 were reviewed. The record included: Hepatitis B surface antigen (HBsAg), IgM and IgG anti-HBc antibodies, and VDRL or RPR test performed at diagnosis. History of treated syphilis before diagnosis was also recorded. Results: Two hundred eighty patients aged 18 to 70 years were included (261 males). At diagnosis, there were no patients with HBsAg positive, 56% of men and no women had anti-HBc antibodies positive, and 17% of men and no women had VDRL / RPR reagents tests or history of treated syphilis. Conclusions: In this study, men with HIV infection diagnosis have a high prevalence of past infection (but not current) by Hepatitis B, and to a lesser extent, by past or current infection by Treponema Pallidum. That reality is not observed in the group of women.

20 YEARS OF CORONARY ANGIOGRAPHY. PATIENT CHARACTERIZATION, OUTCOMES AND COMPLICATIONS IN A CHILEAN UNIVERSITY CENTER.

H. Ugalde, A. Ramírez, D. Ugalde, M. Muñoz, F. Ayala, S. García, G. Dusallant, E. Chaigneau, E. Farias.

Coronary angiography is an invasive procedure used to evaluate coronary arteries anatomy and stenosis lesions. The procedure has clear indications and known complications Purpose: Describe the last 20 years of experience of cine-coronary angiography in our department, emphasizing its outcomes and complications. Material and Methods: Prospective record of every diagnostic coronary angiography in our center from January 1992 to December 2011, obtaining demographic data, outcomes and complications. Results: 13717 patients were studied; mean age 60.2 years (range 14-100), male 68.9%, risk factors: hypertension (53%), smoking (26%), dyslipidemia (24%) and diabetes (20%). Clinical diagnosis to indicate coronary angiography was myocardial infarction in 26%, chronic and stable angina in 22%, unstable angina 19%, and valvular heart disease 8%. A 16% of patients had relevant comorbidities, more frequent were peripheral arterial disease and chronic kidney failure. The femoral approach was used in 88% of procedures and radial access in 8.5%. The first attempt was unsuccessful in 0.1%, but all were successful in a second attempt. Five operators performed 94% of procedures. The Coronary arteries anatomy was normal in 94.9% of cases; the most frequent anomalies were muscular bridge (1.53%) and anomalous origin of coronary arteries (1.47%). 30% of patients had no significant lesions, 22% had single vessel disease, 15% two or three vessel with critical stenosis; 3% trunk lesion. 90% were right-dominant. During the procedure 3.4% patients presented some complications: 0.1% were severe, 0.04% stroke, acute coronary occlusion and 0.03% anaphylactic shock. After procedure 2,3 % have some complications, 0.1% severe: 0.07% renal injury requiring dialysis and 0.03% cholesterol emboli. 0.5% of patients presented local complications: pseudoaneurism in 0.3%, large hematomas in 0.15% and acute arterial thrombotic occlusion in 0.07%, 0.2% required local surgery. A total of 19 patients died (0.14%), 14 of them had acute myocardial infarction with cardiogenic shock before intervention; 5 patients (0.04%) died directly from the procedure. Conclusions: Coronary angiography is an invasive procedure, used mainly in the study for rule out coronary artery disease. As a procedure was more frequently in men, with low comorbidity, and with 30% of cases with no relevant stenosis. The complication rate was low and its mortality was related to very critical disease.

OXIDATIVE STRESS IN PATIENTS UNDERGOING CARDIAC SURGERY AND ITS RELATIONSHIP WITH POSTOPERATIVE ATRIAL FIBRILLATION.

Gutiérrez R, Fernández R, Briones JL, Miranda A, Rodrigo R.

Purpose: Atrial fibrillation is the most common complication of cardiac surgical procedures performed with cardiopulmonary bypass. It contributes to increased hospital length of stay and treatment costs. The pathogenesis of postoperative atrial fibrillation is considered to be multifactorial. However oxidative stress is a major contributory factor as the consequence of ischemia/reperfusion event occurring in this setting. Considerable evidence suggests the involvement of reactive oxygen species (ROS) in the pathogenic mechanism of this arrhythmia. The aim of this study was to determine the profile of blood oxidative stress and antioxidant defense biomarkers in patients undergoing cardiac surgery with extracorporeal circulation, and their association with

the occurrence of postoperative atrial fibrillation (AF). Material and methods: This is a descriptive study conducted in the University of Chile Clinical Hospital, between 2007 and 2010 on 82 patients undergoing cardiac surgery with extracorporeal circulation. Blood was sampled throughout the protocol and atrial tissue was obtained during surgery. Antioxidant status was determined through the ferric reducing ability of plasma (FRAP), erythrocyte and atrial tissue thiol index (reduced/oxidized glutathione ratio) and antioxidant enzymes activity. Oxidative stress was assessed through malondialdehyde (MDA) and protein carbonylation measurements. The leukocyte count, levels of fibrinogen and high-sensitivity C-reactive protein (hs-CRP) were also determined as inflammation-related parameters. $P < 0.05$ was considered statistically significant. Results: Postoperative AF occurred in 26 of 82 patients (31.7%). Patients with postoperative AF had higher levels of malondialdehyde and protein carbonylation, but lower levels of FRAP and glutathione peroxidase activity. The highest level of hs-CRP was reached following 8 h in the postoperative period. The multivariate regression analysis significantly showed positive association between the levels of hs-CRP and MDA and the occurrence postoperative AF. The area under the ROC curves for hs-CRP and MDA were 0.73 and 0.69, respectively. Conclusions: Our results are in agreement with previous studies, in confirming that patients with postoperative AF present a higher oxidative damage. Data are consistent with the view that this damage is an unavoidable event in cardiac surgery with extracorporeal circulation. Further, plasma hs-CRP and MDA levels, at the early postoperative period, are valuable predictors of the occurrence of AF in the setting of cardiac surgery with extracorporeal circulation.

MAGNETIC RESONANCE IMAGING IN THE DIAGNOSIS OF MYOCARDITIS. CLINICAL CHARACTERISTICS AND LABORATORY TEST OF PATIENTS WITH DIAGNOSIS OF MYOCARDITIS.

Llancaqueo M, Ramos C, Díaz JC, Lara J, Valdivieso M, Barriá A, Aramburu I.

Introduction: acute Myocarditis (Mc) is not a widely recognized entity in the clinical practice entity given its variable clinical presentation and lack of a "gold standard" method of diagnosis. Magnetic Resonance Imaging (MRI) in our country is a recently introduced method of study of cardiac conditions. Objectives: To describe the variables in demographics, clinical, ECG, biomarkers and patient images in patients who have been hospitalised for probable myocarditis and who are MRI compatible. As well to describe the findings of the MRI. Method: We made an evaluation of all the patients admitted to the Cardiology service of our hospital who were suspected of having myocarditis between 2006 and August 2011. The MRI was run on a Siemens SONATA unit of 1.5 tesla. Syngo and ARGUS Softwares. Protocol: Series of cineMR, (powered by T2 (tripleIR), FLASH IR sequence to evaluate the significance 10 minutes after the use of gadolinium. Short axis, longitudinal and transversal long axis. Image interpretation: semiautomatic motility analysis with ARGUS software, visual analysis of the embossing and edema. Results: We diagnosed Myocarditis in 22. 20 males (M), Age 28,8 years old \pm 13 (15 a 61 range). Clinical characteristics: Tobacco 10 (45%), drugs 2 (6%), (1 cocaine y 1 marijuana), Lupus 2, previous respiratory infections 11(50%) y digestive manifestation 1 (5%). Clinical symptoms: thoracic pain 20(91%), fever 12 (55%), dyspnea 5 (23%). Admission ECG :SDST 13 (59%), IDST 1 (5%), T wave alterations 8 (36%), PQ 2 irregularity (9%), Q wave 4(18%), ventricular arrhythmia 2 (13%), FA 1(5%). Biomarker elevations: CK total 19 (86%) and 560 ± 396 UI, CK MB 20 (91%) and 68 ± 57 UI, Troponin 20 (91%), 14 ± 10 ng/ml. Echocardiogram: FE below 55% in 4 (18%), moderated aortic insufficiency 1 (5%), severe IT 1 (5%), slight to moderated HTP in 2 (9%), diastolic dilation VI (> 57 mm) in 2 (9%), systolic dilation of VI (> 37 mm) in 6 (27%), alteration of the motility segments 12 (55%), pericardial bleeding 6 (27%). Coronography was performed on 10 patients (45%), all cases were normal. MRI was performed in all cases, diagnosis of Myocarditis was confirmed. Diagnostic: "gadolinium enhancement (LGE) at least in 1 segment, of 17 possible, in a non ischemic pattern on patch, in 100% of cases. MRI findings: Out of 374 of evaluated segments we found: Edema, motility alteration y belated embossing on 15%, 16% y 26% respectively. The most frequent segments affected by Edema were 5, 11, 12 and 16. Motility alteration 5, 12, 15 and 16, y belated significance on segments 5,11 and 16. Conclusion: MRI is a useful tool in the diagnosis of Myocarditis. In our series of results we discovered that the damage to the left ventricle was of a non uniform nature in which the most frequently affected segments are the inferolateral wall.

CLINICAL FOLLOW-UP IN PATIENTS ABLE TO REACH 10 METS IN THEIR TREADMILL EXERCISE STRESS TEST ASSOCIATED TO 99MTC-SESTAMIBI SPECT FINDINGS.

JS. González, H. Prat, I. Berrocal, F. Kuschel, I. Ruiz, T. Massardo

Being able to achieve 10 METS during an exercise test appears to have a good negative predictive value for cardiac events in coronary artery disease (CAD), independent of their cardiac conditions. AIM: to know the outcome in patients with ≥ 10 METS in their treadmill exercise test associated with myocardial ischemia. METHODS: We reviewed 2.571 consecutive stress myocardial SPECT since 2006, 780 of them performed exercise stress test (EST); 152 were able to reach ≥ 10 METS and $\geq 85\%$ maximal predicted heart rate (MPHR); 82% males; group age was 56 ± 9 years (range: 26-77 y; 5% < 40 y); with diverse cardiovascular risk

factors. All performed Bruce protocol and were studied with gated ^{99m}Tc -sestamibi SPECT. Record of major or minor cardiac events was performed via phone contact or reviewing clinical files. RESULTS: SPECT was required due to CAD screening in 75% (including pre-operators) and to CAD risk stratification in 25% (including myocardial infarction and/or revascularization); 99% in I NYHA functional class. Rest electrocardiogram was normal in 41%; had Q wave in 6% and other conduction abnormalities in 12% (no left bundle branch block). Main EST parameters were: test duration 9 ± 1 min; MPRH $94\pm 6\%$; METS 11.5 ± 1.7 ; 48% suspended for fatigue; 47% reached MPRH and the rest for dyspnea, hypertensive response or angina. EST was positive for ischemia in 16%, negative in 64% and non-conclusive in 20%. SPECT myocardial perfusion was normal in 72%; all but one had adequate left ventricular function without dilation. There were reversible perfusion defects in 25% of cases (10% with some fixed component) and only 4% with fixed defects. Ischemia was moderate or severe in 47% of reversible cases. There was 75% of concordance between reported ischemia with EST and reversibility with SPECT (Cohen kappa: 0.31). We were able to follow-up 79% cases [mean: 25 ± 16 m; median: 24 m; range: 3-81 m]. There were no cardiac deaths, myocardial infarctions. We rule-out death in the rest inquiring in our civil registration office. There were 6 coronary revascularization procedures performed within 1 year post SPECT, in patients with significant reversible ischemia. CONCLUSION: A quarter of our patients submitted to myocardial SPECT with good exercise capacity had reversible perfusion defects. There were no major cardiac events; 16% of the patients with SPECT ischemia were submitted to revascularization. In good functional capacity patients, this findings support the idea to select with appropriate criteria non-invasive strategies to evaluate CAD, in spite of their relative good prognosis.

BIOCHEMICAL AND METABOLIC CHARACTERISTICS IN COCAINE DEPENDENT INDIVIDUALS STUDIED DURING RECENT ABSTINENCE.

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Cocaine use is a well known risk factor (RF) for vascular complications such as myocardial infarction and stroke, which characteristically affect young individuals. Besides the direct deleterious effect of cocaine on the vessel wall, other RF could contribute to the development of premature atherothrombotic events. AIM: to characterize a population of cocaine addicts from a biochemical and metabolic standpoint compared with healthy controls. Methods. We studied 63 DSM IV cocaine dependents during recent abstinence (with consumption proven by urine analysis). The hematological, general chemistry and lipid serum profiles were compared with a group of 53 healthy controls with no dependence. Results. Cocaine group age was 32.2 ± 8.1 years; range: 19-53 ($p=\text{ns}$ vs. controls). Eighty-one percent were males. Mean cocaine consumption time was 5 ± 2 years; range: 2-20. Most of them were polydrug consumers being cocaine their main dependence; alcohol was present in 51% and tobacco smoking habit in 91%. In the cocaine group, 3 patients were obese, 2 already treated with bariatric surgery; 1 had arterial hypertension and another dyslipidemia. Patients with diabetes mellitus were excluded from the study. No differences between cocaine patients and controls were observed in hematocrit, hemoglobin, red and white blood platelet count and ESR. Plasma creatinine was normal in both groups with significant lower values in cocaine dependents ($p=0.0126$); they also had normal but lower total proteins and albumin ($p=0.0006$ and $p<0.0001$, respectively). Blood ureic nitrogen and urea were lower in cocaine group but also within normal limits (both $p<0.0001$). Fasting serum glucose level was elevated in 12/63 cocaine patients; mean glycemia: $92.7\pm 22.5\text{mg/dL}$ vs. 82.3 ± 9.7 in controls ($p=0.0056$); the highest value was 180 mg/dL corresponded to a 52 years old female who had another measurement of 105 mg/dL. Calcium, phosphorus, uric acid, bilirubin, SGOT, LDH and alkaline phosphatases were normal ($p=\text{ns}$ vs. controls). Lipid profile was abnormal in cocaine patients: triglycerides and LDL were elevated ($p=0.0007$ and <0.0001 , respectively) but total cholesterol was lower ($p=0.035$) and HDL similar than controls ($p=\text{ns}$). US-PCR in cocaine users was 6.9 ± 4.7 (range: 1.4-18.7) vs. a subgroup of controls with 4.2 ± 1.4 ($p=0.054$). Conclusions. Chronic cocaine consumption in this group of mostly polydrug dependents, demonstrated mild abnormalities in plasma proteins and lipids that could be explained, in part, by dietary disorders, muscular mass changes and perhaps altered protein metabolism. These features may potentiate cocaine-induced vascular damage and should be considered in comprehensive psychiatric management.

CORONARY ASYMPTOMATIC DIABETIC PATIENTS STUDIED WITH EXERCISE MYOCARDIAL PERFUSION SPECT: 3 YEAR FOLLOW-UP.

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Silent myocardial ischemia is common in patients with diabetes mellitus (DM), but its clinical significance is unclear. The purpose of this study was to evaluate coronary artery disease (CAD) using myocardial perfusion in asymptomatic DM patients through exercise SPECT, performed at baseline and after a 3 year follow-up. Methods: As part of a multicenter trial (IAEA CRP CHI 13636), we studied 32 Chilean asymptomatic patients with at least 5 years of type 2 DM, without known CAD. Patients selected were older than 45 years; mean age 58 year old, 59% of them males, 9.7 years of known DM, had 1 or more cardiovascular risk factors

besides DM (smoking, hypertension, dyslipidemia or familiar history); had an average BMI of 28,5 kg/m² and had normal or mildly abnormal baseline EKG. We performed an exercise protocol and gated 99mTc-Sestamibi myocardial perfusion SPECT at baseline and after 36 months. Clinical history and serum profile markers were also assessed at the same interval. Results: 55% of patients had elevated baseline HbA1c (over 7.5%) with no significant changes after 3 years. Mean fasting glucose level was 154 at baseline and 174 mg/dl after 3 years (p=ns); total, HDL and LDL cholesterol were 186, 45 and 106 mg/dL, respectively; triglycerides 171 mg/dL and creatinine 0.89 mg/dL (all p=ns vs. their 3rd year control). -Exercise EKG test was suggestive of CAD and positive for ischemia in 7/32 (22%) at baseline and in 3/32 (9%) after 3 years (p=ns). The METs achieved in the stress test initially and at 3 years corresponded to a mean of 8.7 and 7.9, respectively (p=0.02), maximal predicted heart rate was also slightly lower at 3 years means of 98.7% and 94.6% (p:0.03) with no significant difference in the tests length. -Baseline SPECT was positive for silent ischemia in 11/32 (34%) and in 9/32 (28%) after 3 years (p=ns). There was no significant difference between ischemia size and severity defects in both SPECTs but in two patients with transient defects that normalize (both with adequate stress EKG tests). Another patient, with an EKG interpreted as incomplete left bundle branch block, had left ventricular dilation and systolic dysfunction, corresponding to an unknown inferior myocardial infarction, seen as a fixed defect in the SPECT. Those patients with positive Sestamibi had medical and lipid-lowering therapy reinforcement. Clinical follow-up confirmed significant CAD in 2 of them with coronary angiography; there was no revascularization or any other cardiovascular events, but one stroke. Conclusions: A third of our DM patients had silent myocardial ischemia. After 3 years of medical therapy, despite insufficient metabolic control, no significant progression of CAD was shown, with a trend to lower stress EKG abnormalities; this features should be confirmed with a larger multicenter sample.

PATIENT WITH NON-HODGKIN LYMPHOMA, MELANOMA AND A PITUITARY ADENOMA DIAGNOSED WITH 18F-FLUORDEOXYGLUCOSE (FDG).

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Introduction and description: FDG is a metabolic glucidic tracer widely employed in several malignancies; it has a well recognized value for diagnosis, staging and therapy management. However, normal variants and some benign conditions should be recognized to diminish cancer false positives. We present a 62-year old male with a stage IV Non-Hodgkin Lymphoma (NHL)-large cell B immunophenotype, CD30 negative- under chemotherapy (CHOP followed by Mabthera). He has a prior index melanoma resected 3 years ago with a positive left axillary sentinel node and negative lymphadenectomy. He has also a prior sarcoidosis 10 years ago. In current CT presented a right lower pulmonary lobe 1 cm lesion and mediastinal and subcarinal prevascular, cervical node involvement as well two 1.5 cm nodular lesions in the left perirenal space, possible metastatic and a normal brain CT. He also had a recent normal Gallium 67 citrate scintigraphy. He was studied with a whole body PET-FDG: moderate increased uptake in T11 vertebral body, explained by degenerative disease and a midline rounded area at skull base level, on-pituitary site that should be complemented with MRI to rule out pituitary adenoma or secondary lesion. The test was reported as compatible with complete response to NHL therapy. Posteriorly, a MRI demonstrated increase in the pituitary volume with right sellar floor depression, does not behave as adenoma, the findings were suspicious of anterior pituitary neoplasm that remain under observation. A complete endocrine study found only high FSH levels. The patient was evaluated by neurosurgeons but a new MRI one year later showed no progression and concluded a pituitary adenoma; angiotensin converting enzyme was normal. Later a lymphoma biopsy showed commitment and the patient received new chemotherapy. The next year presented a frontal cortico-subcortical brain lesion whose biopsy demonstrated metastatic melanoma; surgery and local radiation therapy was performed. The patient died a year later from metastatic melanoma. Discussion: FDG positron emission tomography imaging in this case was helpful for both LNH therapy control and melanoma restaging. Besides, the tracer found a new unrecognized disease: a benign pituitary adenoma, a very rare finding that should be carefully evaluated when abnormal uptake is observed at pituitary level. Sarcoidosis, a condition no active in this patient, also could present increased uptake at different tissues mainly lymph nodes with a relative symmetrical distribution.

MARKERS OF ENDOTHELIAL DYSFUNCTION IN CHRONIC COCAINE CONSUMERS.

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Cocaine abuse is associated with an increased risk of cardiac and cerebrovascular events. The underlying mechanisms leading to these complications are common consequences of chronic endothelial damage. Endothelial dysfunction may be assessed by the impaired vasodilator response to a stimulus and also by measuring plasma markers of endothelial damage. Increased number of circulating endothelial cells (CEC) is considered an early signal of endothelial dysfunction and reflects an altered cell-cell and cell-matrix interaction. We hypothesized that chronic cocaine consumption induces endothelial damage which may contribute to the vascular complications observed in these individuals. Purpose: To quantify CEC, endothelial progenitor cells (EPC), plasma levels of stromal derived factor 1 (SDF-1) and metalloproteinase (MMP) 2 and 9 activity, in chronic cocaine consumers. Material

and Methods: We studied 13 cocaine-dependent patients in recent abstinence (aged 26-53 years; mean: 37 years) and also 13 sex and age matched healthy controls; all patients fulfilled DSM-IV criteria for cocaine dependence with drug exposure (proved with urine analysis) within 72 hours of blood sampling. CECs were isolated from peripheral blood using immunomagnetic beads-coated with anti-CD146-Ulex Europaeus lectin- and counted under fluorescence microscopy. EPC number was evaluated for their expression of CD34, CD309 and CD133 by flow cytometry; SDF-1 levels by enzyme-linked immunosorbent assay and MMP 2 and 9 activities by zymography. Results: Compared to controls, CECs were significantly elevated among cocaine users (63.2 ± 17.9 vs. 13.9 ± 5.3 ; $p < 0.0001$). However, EPC number in cocaine consumers ($CD34 = 0.108 \pm 0.02\%$; $CD34/CD309 = 0.043 \pm 0.04\%$; $CD34/CD133 = 33.7 \pm 3.4\%$) was significantly lower than controls ($CD34 = 0.213 \pm 0.08\%$; $CD34/CD309 = 0.617 \pm 0.04\%$; $CD34/CD133 = 46.4 \pm 2.5\%$, $p = 0.0317$). On the other hand, MMP2 and 9 activity was increased in cocaine consumers as compared with non consumers $MMP9 = 26 \times 10^3 \pm 7 \times 10^3$ vs. $17 \times 10^3 \pm 3 \times 10^3$ ($p = 0.0046$) and $MMP2 = 15 \times 10^3 \pm 2 \times 10^3$ vs. $12 \times 10^3 \pm 2 \times 10^3$ ($p = 0.0199$). SDF-1 levels observed in the group of cocaine users were 5466.8 ± 348.6 pg/mL and 4801.7 ± 353.2 pg/mL, in the control group ($p \leq 0.0005$). Conclusions: Cocaine abusers have a significantly higher number of CECs and a reduced number of EPC. Moreover, we observed an increment in the activity of MMP2 and 9 and elevated levels of SDF-1. Taken together, these findings suggest that although the signals for EPC recruitment exist, cocaine use is associated with disturbances in the balance between vessel wall damage and repair mechanisms. Persistence of this condition may conduct to endothelial dysfunction, contributing to the atherothrombosis observed in cocaine addicts.

VARICELLA ZOSTER VIRUS ENCEPHALITIS IN A PATIENT WITH DECOMPENSATED PERSONALITY DISORDER: REPORT OF A CASE.

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Introduction and description: La encefalitis viral es un trastorno infeccioso del sistema nervioso central poco frecuente. Su presentación típica consta de síndrome febril leve, signos meníngeos y compromiso cualitativo de conciencia. Los trastornos de personalidad son enfermedades psiquiátricas poco frecuentes en la población general, pero de presentación precoz y generalmente grave. El síndrome neuroléptico maligno es un trastorno asociado al uso de anti-psicóticos típicos en altas dosis, cuya presentación típica es la hipertermia, rigidez muscular, rabdomiolisis y falla renal. Clinical case: D.M.P., 16 años. Con antecedentes de trastorno de personalidad en estudio desde el 2010 y múltiples descompensaciones psiquiátricas severas durante el último año, en tratamiento permanente con litio. Hospitalizado en Clínica Psiquiátrica por un cuadro de aproximadamente un mes de evolución caracterizado por síntomas maníacos y agitación psicomotora de difícil control, además de sintomatología psicótica. Durante hospitalización en Clínica Psiquiátrica se maneja cuadro psicótico con anti-psicóticos típicos y atípicos en altas dosis, evolucionando con hipertermia, rigidez muscular leve y alza de creatin-quinasa, derivándose a la Unidad de Pacientes Críticos del Hospital Clínico Universidad de Chile (HCUCh) por sospecha de síndrome neuroléptico maligno. En este centro se maneja suspendiéndose anti-psicóticos, con hidratación endo-venosa (para protección renal), medidas anti-piréticas y relajantes musculares, con buena respuesta, evolucionando sin complicaciones. Luego de un día de hospitalización en HCUCh, paciente presenta convulsión tónico-clónica generalizada, por lo que se realiza resonancia nuclear magnética de cerebro con gadolinio, informada como normal. Se realiza punción lumbar que informa: 5 leucocitos/mm³ (100% mononucleares), con proteínas y glucosa normales. Se toma examen de reacción de polimerasa en cadena para virus Varicella zoster, informado como positivo, iniciándose tratamiento con aciclovir endo-venoso (10 mg/kg cada 8 horas, por al menos 14 días), con buena respuesta. Paciente evoluciona en buenas condiciones, sin deterioro de función renal y con disminución de rigidez muscular. No presentó nuevos episodios convulsivos. Evoluciona descompensado desde el punto de vista psiquiátrico, manejándose con benzodiazepinas (se difiere inicio de litio debido a nefrotoxicidad asociada al aciclovir y al síndrome neuroléptico maligno). Discussion: Este caso nos muestra una presentación atípica de una encefalitis viral, en un paciente con antecedentes de patología psiquiátrica descompensada, lo que plantea un desafío diagnóstico. Probablemente la descompensación aguda que sufrió durante el último mes (con sintomatología psicótica) y su requerimiento de altas dosis de anti-psicóticos en su hospitalización reciente en Clínica Psiquiátrica sea explicable por la encefalitis viral, por sobre un trastorno de personalidad asociado.

PLASMA CELL LEUKEMIA IN PREGNANCY.TWO LIFES IN DANGER.

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Introduction: Plasma cell leukemia (PCL) accounts less than 5% of plasma cell (PC) dyscrasias. The disease can originate de novo as primary PCL (pPCL) or can evolve from multiple myeloma (MM) as secondary PCL (sPCL). PCL is characterized by increase peripheral plasma cell circulation, an aggressive clinical course, and poor overall survival. Case: 37-year-old patient with 23 weeks of gestation was referred to a university hospital with acute leukemia diagnosis. Complete blood count showed 34% of circulating

PC, normal protein electrophoresis, kappa monoclonal immunofixation and serum free kappa light chain (FLC) of 430mg/L with K/L ratio of 55. Bone marrow aspirated showed 90% of plasmablasts. MRI revealed dorsal paravertebral mass. After multidisciplinary team approach including hematology, obstetrician and fetal medicine, personalized chemotherapy CVAD (cyclophosphamide, vincristine, doxorubicin and dexamethasone) was chosen, in order to minimize maternal and fetal morbidity until the week 34th when programmed cesarean delivery of a healthy girl (APGAR score 8-9) was performed. The hematological evaluation after CVAD exhibited partial response: 18% of bone marrow plasmacytosis and kappa FLC of 231mg/L. After childbirth, the main objective was to achieve complete remission and perform autologous bone marrow transplantation (ABMT). The chemotherapy protocol was changed to cyclophosphamide 300mg/m², bortezomib 1.5mg/m² (weekly) and dexamethasone 40 mg. After two cycles, FLC kappa decreased to 45.7mg/L and bone marrow biopsy showed 12% of plasma cells. The therapy was intensified to VDT-PACE that adds thalidomide, cisplatin, doxorubicin and etoposide. After two cycles, hematologic and immunophenotypic complete response was achieved, with normalization of FLC kappa to 29.6mg/L and disappearance of extramedullary lesions. During hospitalization, 6000000 per Kg of peripheral CD 34 were collected for cryopreservation. ABMT is planned. Discussion: Primary PCL is a very aggressive subtype of PC neoplasms. The prognosis of it is poor with a median survival of 7 to 11 months. Treatment should be individualized, including newer anti-myeloma drugs (proteasome inhibitors, IMiDs) in order to achieve complete remission and perform ABMT. This strategy has improved the survival 68% in 3 years. This is the first case reported in the literature of PCL in pregnancy. Personalized treatment and multidisciplinary team approach, with the purpose to give greater life expectancy for both mother and unborn, must be the therapeutic goal of a pregnant patient with hematologic malignancy.

ACUTE MYOCARDIAL INFARCTION IN PATIENTS YOUNGER THAN 40. 16 YEARS OF EXPERIENCE AND COMPARISON WITH OLDER PATIENTS GROUP.

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Literature is scarce in the topic of acute myocardial infarction in young patients. There is speculation about a possible rise in its incidence, mainly in male patients with association to illicit drugs. Purpose: Characterize the young group of patients comparing with older patients, evaluate if there is an increasing number of cases. Material and Methods: Historical cohort from a prospective registry of patients admitted to coronary unit of our hospital from January 1988 to December 2003, patients 0 to 39 years old are identified. Presentation data is obtained, hospital management and complications is evaluated and follow up mortality is recorded from official civil registry. Variables were compared with older patients. With chi square and student's t tests. Results: 1501 patients were admitted with acute myocardial infarction, 78 were younger than 40 years old (5.2%). Mean age 34.8, 83.3% male, 79.5% smokers, 30.8% dyslipidemic, 24.4% obese and 3.8% diabetic. 20.4% had history of coronary disease. In 28.2% a stressful factor was identified, 2 patients reported cocaine use. The mean time to arrival was 10 hours. 92.3% had Killip 1, 80.8% had ST elevation. 35 had reperfusion therapy, 97.4% received aspirin, 55.1% beta blocker. 19.2% had complications. 94.9% were studied with coronariography. 30.8% required revascularization. Mean hospitalization time was 10 days, survival was 100%. At discharge 96.2% were taking aspirin, 57.7% beta blockers and 42.3% hypolipemic agents. 98.7% were followed up, 5-year mortality was 10.6%, mostly from cardiovascular causes of death. When compared to older patients, the younger group had higher proportions of smoking, dyslipidemia and obesity, are less hypertensive or diabetic. Younger patients have a smaller proportion of positive history for coronary disease, have better hemodynamics at presentation, lesser severity of topography and electrocardiographic alterations. Both groups had similar initial treatment, but beta-blockers are more used in younger patients and coronariography was more frequently performed. Inpatient and follow-up mortality was lower in Young patients. There was no trend to changes in the proportion of patients younger than 40. Conclusions: Acute myocardial infarction in younger patients did not show an increasing prevalence, and illegal drug use was lower than usually reported, however subdiagnosis might be an issue. In this study younger patients presented several risk factors, had better hemodynamics and survival. However prevention must be a priority considering the long term consequences of acute myocardial infarction and a 5-year mortality of 10% after the initial event.

CHARACTERIZING ACUTE MYOCARDIAL INFARCTION IN CHILEAN DIABETIC PATIENTS, HISTORICAL COHORT STUDY.

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Acute Myocardial Infarction is one of the main causes of death in Chile. In diabetic patients higher mortality is described, in this country there are few studies that evaluate this population. Purpose: Describe acute myocardial infarction in diabetics and compare its initial presentation, management and outcomes with non-diabetics. Material and Methods: Historical cohort study from the registry of patients admitted to the coronary care unit from January 1988 to December 2003. Patients with acute myocardial infarction and diabetes were detected. Clinical presentation, management and outcomes were evaluated, and 5 year follow up mortality was investigated in civil registry. Diabetic patients were compared with non diabetics first and then with a sex and age

paired cohort of non diabetic patients. Categorical variables were analyzed with Chi square test and continuous variables were tested with Student's t test. Results: 1476 patients were admitted with acute myocardial infarction during study period. 300 (20.3%) were diabetics. The diabetic patients had a mean age of 64.5 years, 68.3% masculine, 55.7% were hypertensive, 46.3% had history of angina and 10% had a previous acute myocardial infarction. The mean time of symptoms to emergency room was 11.8 hours, 63.7% presented in killip 1, 75% with ST segment elevation and 53% had anterior wall infarction. 28% received reperfusion therapy, 67.7% were studied with angiography and 43.7% required revascularization treatment, 39.9% had three vessel disease. Mean hospitalary stay was 15.9 days and inpatient mortality was 24.3%. At 5 years follow up mortality was 29%. Non paired, non diabetic patients were younger, in higher proportion masculine, in lower proportion hypertensive, consulted earlier, with higher killip 1 fraction; they received more reperfusion therapy, had lower mortality and fewer complications; at follow up they received more complete medical treatment and had lower mortality at 5 years. When comparing diabetics with paired non diabetic patients, these differences persist. Discussion and conclusions: Acute myocardial infarction in diabetics present as a less hypertensive and less masculine population, with worse hemodynamic but not translated into a more aggressive treatment, receiving lesser reperfusion therapy. They evolve with more complications but studied in a lesser proportion, having worse atherosclerotic compromise on angiography. Diabetics receive revascularization in lesser proportion, and have higher inpatient and follow up mortality, considering female proportion and age, paired analysis was performed and differences persisted. In acute myocardial infarction diabetes is a risk factor of mortality, however there are differences in treatment that demand improvement.

DESIGN OF A CLINICAL PREDICTION RULE FOR IDENTIFYING INFECTIOUS DISEASE IN PATIENTS WITH FEVER OF UNKNOWN ORIGIN.

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Introduction: Fever of unknown origin (FUO) is an entity of difficult diagnosis, due to the several etiologies that may cause it. Actually, there is limited evidence to help doing an efficient etiologic study. Purpose: To design a clinical prediction rule (CPR) for identifying infectious disease in patients with classic FUO. Material and Methods: Data was obtained from a historical cohort of patients admitted in our Internal Medicine unit, between 2006 and 2011, for study of classic FUO, defined by Durack criteria (Curr Clin Top Infect Dis 1991). To perform the analysis, we included only patients with an identifiable cause of FUO. Demographic, clinical and laboratory variables were analyzed. To derivate CPR, we included potential predictors and included in a logistic regression model. For those variables that resulted statistically significant as predictors, we calculated odds ratio (OR) and weight of the variables to include them in the CPR. Finally, we made a Receiver Operating Characteristic (ROC) analysis to determinate the quality of the rule. Results: 138 patients were included. Age: 42.9±17.0 years. Male: 58.3%. Cause of FUO: Infectious: 48.8%. Autoimmune: 19.8%. Cancer: 24.0%. Other causes: 7.4% The logistic regression showed 4 significant predictors: Serum procalcitonin (PCT) over 0,1 ng/mL (OR: 5,1), fever of less than 1 month (OR: 2,7), presence of chills (OR: 2,6) and evidence of palpable lymph nodes (OR: 1,7). The ROC curve of the CPR had an AUC of 0.87 (p<0.001). The best cut-off point had sensibility (Se): 90% and specificity (Sp): 85%, with an accuracy of 87% (positive predictive value [PPV]: 79.6%, negative predictiv value [NPV]: 1.6%). After excluding patients who had HIV as the cause of FUO, the best cut-off point had Se: 96% and Sp: 89%, with an accuracy of 92% (PPV: 84.6%, NPV: 0.4%). Conclusions: In patients with classic FUO, the presence of PCT > 0.1 ng/mL, fever of less than 1 month, chills and palpable lymph nodes were associated to infectious causes. A CPR based on these variables had a high accuracy and negative predictive value, especially in HIV negative patients, so it may be useful specially to exclude infectious disease. This CPR should be validated with other populations to determinate its usefulness.

EFFECT OF A PROGRAM OF PHYSICAL ACTIVITY ENHANCEMENT USING PEDOMETERS IN CRONIC OBSTRUCTIVE PULMONARY DISEASE PATIENTS.

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Purpose: To determine the clinical benefits of a physical activity enhancement program with feedback of a pedometer in stable COPD patients. Material and Methods: 55 stable COPD patients recruited from primary health centres and hospitals who accepted to participate in the study were randomized for a 12-week individual pedometer-based program promoting daily physical activities (experimental group) or usual care (control group). The measurements done at the beginning and at the end of the intervention period were the following: the exercise capacity using the six minute walking test (6MWT), the MMRC scale of dyspnoea, the Saint George Respiratory Questionnaire (SGRQ) and the COPD assessment Test (CAT) to estimate quality of life and the average one week daily physical activity assessed by a pedometer with covered screen, additionally we documented the incidence of acute exacerbations of COPD (AECOPD) during the follow-up. The study was approved by the ethics committee of Hospital Clínico Universidad de Chile. Results: Patients included in the study were 69% male, mean age 68 years, mean FEV1/FVC 55%, mean

FEV1 63% of predicted value and Pack-year index of 39. Control (n = 25) and experimental (n = 30) groups had comparable basal characteristics. There was an increase in the average of step walked daily in both groups but significantly higher in the experimental group (2367 versus 310 steps/day, $p = 0.018$), also it was observed a significant difference in the effect over the symptoms subscale score of the SGRQ (reduction of 9 points versus 4 points, experimental versus control group, $p = 0.033$). The incidence of AECOPD was significantly lower in the experimental group (0,1 versus 0,6 per patient, experimental group and control group respectively, $p = 0.002$). The others measurements were not significant different between both groups. Conclusions: A program of physical activity enhancement with feedback of a pedometer is useful to increase the average of daily walked steps and apparently has some clinical benefits suggested by the effects in the quality of life and in the incidence of AECOP observed in this study. This non-pharmacological program is safe, cheap and easy to implement in almost all COPD patients, mainly for those with less severe stages of the disease where formal rehabilitation program is not achievable in our country for them.

FACTORS ASSOCIATED WITH DELAYED DIAGNOSIS OF HIV INFECTION IN UNIVERSITY HOSPITAL.

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Objectives: Delayed diagnosis of HIV is defined as a CD4 cell count below 200 cells/ μ L or the presence of signs or clinical conditions stage C. Delay in the diagnosis of HIV is associated with increased risk of transmission and worst results with antiretroviral therapy (HAART). The objective of this study is to know the factors associated with delayed diagnosis in the cohort of the Hospital Clínico de la Universidad de Chile. Material and methods: Medical records of HIV patients diagnosed and controlled in the Hospital Clínico de la Universidad de Chile between 1997 and 2011 were reviewed. The record included: sex, age, health insurance (Isapre or Fonasa), CD4 cell counts and clinical category (CDC) at the diagnosis moment. Statistical analysis was done with the programa Stata 11.0. Results: Two hundred eighty patients aged 17 to 70 years were included (261 males). 53% of patients have delayed diagnosis. Delayed diagnosis by age group was: 25% in the age group between 16 – 25 years old; 68% in the age group 26 – 35; 75% in the age group 36 – 45; and 57% in the age group over 45 years old. According to sex, 50% of women and 56% of men have delayed diagnosis, and by health insurance, delayed diagnosis was observed in 54% and 50% of the beneficiaries of Isapre and Fonasa respectively. Conclusions: In this study, factors that are associated with increased prevalence of delayed diagnosis of HIV infection are: male, aged between 26 and 45, and beneficiaries of Isapre. The age at diagnosis is the factor most strongly associated with delayed diagnosis.

IGG4 RELATED DISEASE PRESENTING AS PULMONARY NODULES. CASE REPORT.

C. Araneda, M. Villanueva, R. Gazitúa, G. Figueroa, S. Pino, A. Sciaraffia, D. Ugalde

Introduction and Description: A 56 years old female patient, with history of Type 2 diabetes mellitus and former smoker, treated with oral antidiabetics presented with progressive dyspnea and cough over the last four years, CT scan showed extensive mediastinal lymphadenopathy, multiple pulmonary nodules, two hypovascular liver lesions and multiple bone lesions. A PET-scan confirmed the findings and detected bone lesions in several vertebrae. Protein electrophoresis and immunofixation ruled out monoclonal gammopathy. Lung biopsy was negative for malignancy but showed chronic inflammation with lymphoplasmocitary infiltration. An interdisciplinary meeting was arranged and biopsy specimens were reviewed by a team of pathologists with marked lymphoplasmocitary infiltrate, IgG4 positive immunohistochemistry for 50% of the plasma cells; compatible with IgG4 related disease. Elevated serum IgG4 was present at 3610 mg/dl. Systemic corticosteroids at 60 mg/day of prednisone were started. Control CT and MRI showed mass progression within 6 months and therapy with rituximab was started with pulses at days 0 and 15. 3 months after, CT showed no progression and IgG4 levels were at 3250 mg/dl. Actually, the patient remains clinically stable, with mild dyspnea on exertion. Discussion: IgG4 associated disease is a newly recognize chronic inflammatory process with marked fibrosis that can affect various organs, corresponding to several conditions, previously classified as independent diseases such as autoimmune pancreatitis type 1, Riedel's thyroiditis, Mikulic's disease among others. It's characterized by the infiltration by lymphocytes and IgG4 positive plasma cells, with fibrosis and sclerosis. The suspected etiologies include autoimmunity and molecular mimicry, triggering damage pathways that include fibroblast activation, plasma cell infiltration with tumefactive affection and organ dysfunction. Its diagnostic criteria includes diffuse or localized swelling or masses in single or multiple organs, elevated serum IgG4 concentrations (>135 mg/dl) and histopathologic examination showing marked lymphoplasmocitary infiltration and fibrosis, with IgG4+/IgG+ plasma cells ratio > 40% and >10 IgG4+ plasma cells per high power field. The first line of therapy are glucocorticoids that are initially effective in most patients; other immunosuppressive agents are used as corticoid-sparing in the long term. Rituximab as B-cell depleting therapy is useful and response can be evaluated in months. In this case disease ceased progression after therapy and patient achieved clinical stability.

GIANT CORONARY ARTERY FISTULA IN A 60 YEAR OLD WOMAN. CASE REPORT.

H. Ugalde, M. Muñoz, D. Ugalde, G. Dussailant

Introduction and Description: Coronary artery fistulae are abnormal connections between a coronary artery and any cardiac chamber or other vessels, most of them have a congenital origin. Coronary artery fistulae are rare and most of them are asymptomatic. Larger ones can present ischemic or heart failure symptoms. We present the first case reported in this country. A 60 year old woman, with no risk factors referred a 2-year history of progressive dyspnea and orthopnea during the last year, associated with brief, occasional episodes of fast palpitations, a continuous heart murmur was audible in the third and fourth intercostal spaces at the left sternum border, the rest of physical exam was normal. Electrocardiogram was normal and echocardiography showed mild dilation of right cavities and an image suggesting dilated right coronary artery with flow to right atrium. Symptoms were progressive and coronary angiography was performed, showing a normal left coronary artery and a very large, tortuous right coronary artery with extensive communication to coronary venous sinus. Surgical treatment was decided and direct suture was performed without incidents. Control angiography showed complete closure and branches to the right ventricle were visible, although with slower than normal flow. Patient is doing well 5 years after. **Discussion:** This case describes a coronary artery fistula that was asymptomatic until advanced age, an exceptional finding. Coronary fistulae are found in 0.2 to 0.5% of all angiographies, most of them small and asymptomatic, in larger and symptomatic ones closure is indicated, being surgery the standard option, although percutaneous closure has been described with good outcomes and low morbidity or mortality; however in this case due to the tortuosity and length of the vessel percutaneous closure was not an option. Most patients present a good prognosis after treatment such as this case.

MEDIASTINIC FIBROSIS AS AN ATYPIC PRESENTATION OF SILICOSIS.

L. Toro, D. Sanhueza, M. Ruiz

Introduction: Silicosis is a respiratory disease, secondary to chronic silica inhalation. It is most frequently seen in miners, glass and ceramic workers. It is generally presented as respiratory symptoms of progressive installation. Although, there are atypical presentations such as mediastinic fibrosis, that mimics other etiologies such as lung cancer and tuberculosis, as exposed in this case. **Description:** A 57-year old male, bus driver, who worked as miner for 27 years. He had a history of hypertension, gout and chronic tobacco smoking (13 pack years), previously asymptomatic. He developed acute retrosternal thoracic pain, associated to palpitations and sweats. He was evaluated in the Emergency Room, an EKG was developed which did not show ischemia or other alterations. Cardiac enzymes were in normal ranges with no evolutionary changes. Chest X-ray was within normal ranges. Thorax CT was negative for pulmonary embolism and acute aortic syndrome; it showed mediastinic lymph nodes, a pulmonary nodule of 1.5 cm in left lower bronchial bifurcation and several pulmonary nodules up to 6 mm without calcifications. Bone scintigraphy, head CT, abdominal and pelvis CT were within normal ranges. Fibrobronchoscopy showed an extrinsic bronchial compression at the bifurcation of upper and lower left bronchi. PPD and ELISPOT TB test were negatives. A videothoracoscopy biopsy was performed that showed lymph nodes and lung tissue with dense sclerosis foci associated to fine crystal deposits, with no evidence of granulomas or neoplastic cells, compatible with lung and ganglionic silicosis. Ziehl-Neelsen stain and Koch culture negatives. Thorax MRI showed subcarinal mediastinic and left hilar mass, plus mediastinic fibrosis. **Final diagnosis:** Mediastinic fibrosis secondary to Silicosis. Therapy with Prednisone was initiated, evolving with reduction of pain and respiratory symptoms. He was discharged in good conditions, with ambulatory follow up with Pulmonology Physician. 1 year after this hospitalization, the patient had evolved in good conditions, asymptomatic, ELISPOT TB persistently negative, with a significant reduction of lung images in Thorax CT. **Discussion:** Silicosis is a disease which has many presentations, as seen in this case report. Because its treatment demands to remove silica exposure and use of systemic glucocorticoids, an early diagnosis is mandatory. This entity should be considered in differential diagnosis of cardiorespiratory symptoms, especially in patients with risk factors for Silicosis, where main causes have been excluded.

VALIDATION OF THE SPANISH VERSION OF THE COPD ASSESSMENT TEST (CAT) IN CHILEAN COPD PATIENTS.

L. Mendoza, M. Aguilera, J. Espinoza, N. Balmaceda, P. Horta, P. Barcos, M. Ruiz, A. Castro, F. Contreras, K. Czischke.

Introduction: The COPD assessment Tests (CAT) is an 8-item self-answered measure of health status impairment in Chronic Obstructive Pulmonary Disease (COPD). The score ranges from 0-40, it has been demonstrated that CAT correlates very closely with health status measured using the Saint George Respiratory Questionnaire (SGRQ), a very well validated questionnaire of 76 items (score ranges from 0-100), but its complexity limits its use. Until now the Spanish Version of the CAT has not been tested in Chile. **Purpose:** To validate the Spanish version of the COPD assessment Test (CAT) in Chilean patients with chronic obstructive pulmonary disease (COPD). **Material and Methods:** 83 stable outclinic COPD (61% male, mean age 68 years, mean FEV₁ 63% of

predicted value, Pack-year index of 39) were asked to answer the Spanish version of the CAT and the SGRQ in the same session, both questionnaires are part of a basal evaluation of an interventional clinical study approved by the local ethics committee of Hospital Clínico Universidad de Chile. Results: The average SGRQ and CAT scores were 43.2 and 16.1 points respectively. There was a significant correlation between CAT and SGRQ scores (Pearson Correlation 0.7, $p < 0.001$). According to the score obtained in the CAT are estimated four levels of impact of the COPD: Low (< 10), Medium (10-20), High (21-30) and very high impact (> 30 to 40); we found that the SGRQ score was significantly different according with these levels (low 24.3 points, Medium 41.8 points, High 58.8 points and Very High 69.5 points), ANOVA and Multiple Comparison Bonferroni test, $p < 0.001$. Conclusions: These results demonstrate that the Spanish version of CAT is a well-validated tool in stable Chilean COPD patients helping the estimation of the health status impairment of the COPD patients.

EFFECT OF A PROGRAM OF PHYSICAL ACTIVITY ENHANCEMENT USING PEDOMETERS IN CRONIC OBSTRUCTIVE PULMONARY DISEASE PATIENTS.

L. Mendoza, J. Espinoza, M. Aguilera, N. Balmaceda, P. Horta, A. Castro V. Valdivia, C. Valdebenito, O Diaz, N. Hopkinson.

Purpose: To determine the clinical benefits of a physical activity enhancement program with feedback of a pedometer in stable COPD patients. Material and Methods: 55 stable COPD patients recruited from primary health centres and hospitals who accepted to participate in the study were randomized for a 12-week individual pedometer-based program promoting daily physical activities (experimental group) or usual care (control group). The measurements done at the beginning and at the end of the intervention period were the following: the exercise capacity using the six minute walking test (6MWT), the MMRC scale of dyspnoea, the Saint George Respiratory Questionnaire (SGRQ) and the COPD assessment Test (CAT) to estimate quality of life and the average one week daily physical activity assessed by a pedometer with covered screen, additionally we documented the incidence of acute exacerbations of COPD (AECOPD) during the follow-up. The study was approved by the ethics committee of Hospital Clínico Universidad de Chile. Results: Patients included in the study were 69% male, mean age 68 years, mean FEV1/FVC 55%, mean FEV1 63% of predicted value and Pack-year index of 39. Control ($n = 25$) and experimental ($n = 30$) groups had comparable basal characteristics. There was an increase in the average of step walked daily in both groups but significantly higher in the experimental group (2367 versus 310 steps/day, $p = 0.018$), also it was observed a significant difference in the effect over the symptoms subscale score of the SGRQ (reduction of 9 points versus 4 points, experimental versus control group, $p = 0.033$). The incidence of AECOPD was significantly lower in the experimental group (0,1 versus 0,6 per patient, experimental group and control group respectively, $p = 0.002$). The others measurements were not significant different between both groups. Conclusions: A program of physical activity enhancement with feedback of a pedometer is useful to increase the average of daily walked steps and apparently has some clinical benefits suggested by the effects in the quality of life and in the incidence of AECOP observed in this study. This non-pharmacological program is safe, cheap and easy to implement in almost all COPD patients, mainly for those with less severe stages of the disease where formal rehabilitation program is not achievable in our country for them.

DEPARTAMENTO DE NEUROLOGÍA Y NEUROCIRUGÍA

27ª CONFERENCIA INTERNACIONAL DE ALZHEIMER - LONDRES, INGLATERRA

IS EARLY DIAGNOSIS OF ALZHEIMER'S DISEASE POSSIBLE WITHOUT BIOMARKERS.

Patricio Fuentes

The appearance in specific brain areas of neuritic plaques and neurofibrillary tangles in years preceding the clinical manifestations and the obligation to establish these neuropathological findings for definitive diagnosis are key features of Alzheimer's disease (AD). Dubois et al, have proposed that it is possible to recognize the pre-dementia stage of AD adopting a multidimensional approach including identification of a specific amnesic disorder of the hippocampal type, the atrophy of medial temporal structures, abnormal CSF biomarkers and specific pattern in functional neuroimaging with PET. The memory defect, according to this proposed approach, would not be sufficient for the diagnosis of the prodromal stage of AD, requiring addition of biomarkers. The cost and compliance of these procedures remains to be determined, mainly in the less developed countries. There are reports showing that some cognitive markers are robust predictors of conversion from mild cognitive impairment (MCI) to AD, that low performance in instrumental activities of daily living (IADLs) may constitute an early marker of the disease and that even quantitative gait measures predict future risk of dementia in initially non-demented older adults. This presentation will discuss about the possibility of making diagnosis of AD without dementia, in the clinical setting, without the use of biomarkers.

8TH WORLD STROKE CONGRESS - BRASILIA, BRASIL

INCIDENCE AND SURVIVAL OF INTRACEREBRAL HEMORRHAGE IN CHILE. A POPULATION BASED REGISTER.

V. Díaz, S. Illanes, J. Antinao, V. Olavarría, D. Cárcamo, P. Lavados

The average incidence of intracerebral hemorrhage (ICH) is 25 per 100.000 inhabitants in the world, in Chile is 20 per 100.000. The mortality of hemorrhage stroke is between 30 to 45% Objective: To study the incidence of intracerebral hemorrhage through the country. To Study intrahospitalary mortality and survival of ICH. Method: Is a descriptive and ecological study of national discharges database from 2003 to 2007 from ICD-10 category I 61.0 (0 to 9) and I 62.9 of National Health Ministry (MINSAL), National Socioeconomic Survey (CASEN). We calculated average incidence rates for each region of the country. The rates were adjusted to Europe and World population. Result: 13.259 register and 10.267 persons identifies, 93.6 % had only one event. 37 % died during the hospitalization, 44 % the first day and the 70 % before de five days, the survival is higher in women than men (p= 0.02). The lethality has been decreasing from 42.6 % to 36.4 %. The average incidence rate for the country is 15.2 per 100.000 (95% CI 14.8 to 15.5). The male has 35 % more higher rates through the different regions. V,VI, IX and XII regions have the higher rates of ICH. The correlation of lethality rates was only with poverty (r= 41%, p= 0.0001). Conclusions: The lethality has decreasing during the study period. Most of the patients died during the first five days, the survival is higher in women. The average incidence rates is heterogenic through the country.

SYMPTOMATIC INTRACRANIAL STENOSIS, VASCULAR RISK FACTORS AND ATHEROESCLEROSIS. A PROSPECTIVE SYNGLE-CENTER STUDY IN CHILE.

A. Jaramillo, V. Díaz, J. Vallejos, A. Reyes, J.L. Manterola, P. Orellana, S. Illanes

Background and purpose: Intracranial atherosclerotic disease (IAD) carries a high risk of transitory ischemic attack or ischemic stroke. Available information about vascular risk factors associated to occurrence of symptomatic IAD (SIAD) in the Chilean population is limited. Methods: Prospective cohort study of 340 inpatients with TIA or ischemic stroke consecutively admitted to Stroke Unit of the Hospital Clínico de la Universidad de Chile between 2006 and 2008. 34 (10%) IAD was detected in 30 patients using transcranial Doppler, angio-CT, angio- MRI or angio-DS. Of these, 21 (6,17 %) corresponded to 50% to 99% stenosis in the same TIA/stroke territory, which were considered as SIAD after to exclude any cardiac or extra cranial vascular origin or other. Results: 30/340 (8.8%) of our Hispanic-Mestizo population had IAD. After adjustment by gender and age, only diabetes mellitus history (OR 3.70; CI 95% 1.49 to 9.17; P=0,005) and hypercholesterolemia with a total-cholesterol/HDL-cholesterol (Castelli) Index > 4.5 at admission (OR 4,0; CI 95% 1.5 TO 10.64; P=0.005) were associated with SIAD. Not association among SIAD and previous use of statins, extracranial carotid, arteries aortic arch or coronary arteries arteriosclerosis could be demostered. The basal hematological and biochemical parameters including fasting glucose and lipids were not different between both groups. Conclusion: We report that diabetes mellitus and hypercholesterolemia with a Castelli index >4.5 at admission were independently associated with SIAD despite previous use of statins or anti-hypertensive agents.

DEPARTAMENTO DE OBSTETRICIA Y GINECOLOGÍA

XX FIGO WORLD CONGRESS OF GYNECOLOGY AND OBSTETRICS - ROMA, ITALIA

IMPACT OF MENOPAUSE ON WOMEN'S HEALTH: A SURVEY FROM DIFFERENT AREAS OF THE WORLD – CHILE.

M. Parra

Chile is a country in demographical transition with 16.5 million inhabitants – from which 8.4 million are women. From those, 25% are aged more than 50. The “aging index” for 2010 is estimated to be 35 and life expectancy of women is 81 years old. Those indexes are similar to those of developed countries with a maternal mortality rate of 17/100.000 and a child mortality of 7.9/1000. The median age at menopause in Chile is 49.5 years; using the MRS scale to evaluate quality of life during the menopause in a cohort of Chilean women 81% of the them have a score described as moderate or severe. Within the female population, the most frequent causes of death are – in descendent order and approximate percentages – cardiovascular diseases (29%), malign tumours (26%), respiratory system diseases 10%, digestive system diseases (6%) and endocrine, nutritional and/or metabolic diseases account for 5%. These five large groups represent 76% of causes of female population's deaths. And what is more, breast cancer is demonstrated to be the first cause of death in women aged

more than 50. In the same line, deaths caused by malign tumours and cardio-vascular diseases contributed for more than half (53%) of the loss of expectancy years (AEVP for its acronym in Spanish) estimated for 2009. The cardiovascular risk factors within the female population aged over 50 are: Smoking 36%, Obesity 40%, arterial hypertension 40% (for women over 65 this factor rises to 76%), Diabetes Mellitus 22%, Hypercholesterolemia 58%, Sedentarism 93%, consumption of 5 or more fruits/vegetables per day 18.4% and depression 30%. Until 2002 Chile was the south-american country with the highest rate of hormonal replacement therapy use with 13%. Today, this figure doesn't even reach 4%. A year ago the Ministry of Health added, within the sanitary goals for the 2010–2020 period, the health of women aged over 50. Nowadays there are efforts in the development of sanitary rules and clinical guidelines so that – as soon as possible – all women within this lifespan (>50) can receive adequate treatment for their vasomotor symptoms and handle their risk factors – notably breast cancer.

FACTORS ASSOCIATED WITH LOW QUALITY OF LIFE IN CLIMACTERIC WOMEN.

M. Honorato, C. Fernández, C.E. Winkler, M. Levancini, M. Parra, F. Troncoso

Objectives: The menopause is a change in the physiology of the woman who may be unfavorable aspects of their health and quality of life. Menopause brings several consequences in the psychological, somatic and vegetative area that impact sleep quality in varying degrees of women's lives a meaning in some cases in this impairment. The aim of this study is to identify what factors are associated with secondary living climacteric symptoms in our population. **Materials:** A retrospective descriptive study of 385 women conducted in 2010. Women were enrolled from 43 to 61 years who presented as patients to the clinic of Internal Medicine Clinics of Hospital Padre Hurtado, Santiago Chile and Primary Care Facility of San Ramon, Santiago Chile. **Methods:** They applied the Chilean version of the MRS scale (menopause rating scale). Sample was separated into 2 groups, the group 1 were women asymptomatic or with mild-moderate and group 2 were women with severe and intolerable symptoms. Both groups were identified in a number of factors were compared to determine which of these were related to a better quality of life and which were present in a lower quality of life secondary to postmenopausal symptoms. **Results:** Of the factors studied, we found that depression is significantly associated with poor quality of life, whose prevalence is 18.5% in group 1 versus 52% in group 2 (p 0.01). The factors that are associated with a better quality of life were complete basic education present in 56.3% in group 1 and 45.4% in group 2 (p 0.04), having a paid job prevalent in 44, 5% in group 1 and 30.3% in group 2 (p 0.008) and have an income greater than US 1000 with a prevalence of 8.6% in group 1 and 3.3% in group 2 (p = 0.05). **Conclusions:** The menopause is a time of life of women characterized by symptoms that alters their quality of life to a greater or lesser extent. Many factors influence the quality of life, beyond its own pathophysiology of the altered hormonal axis. These factors is essential to know to handle them and so do a multidisciplinary treatment of these patients.

INTRAUTERINE DEVICE USERS EXPERIENCE IN A PRIMARY CARE FACILITY IN SANTIAGO, CHILE.

M. Honorato, C.E. Winkler, C. Fernández, M. Levancini, F. Troncoso, M. Parra

Objectives: Describe the experience of using the clinic IUD users in a primary care facility in Santiago, Chile. **Materials and Methods:** We performed a retrospective study on 149 women between 17 and 56 users of IUD-380A type, controlled in the Office of the Flag of the municipality of San Ramon, Santiago, Chile in a period of 12 years (1999–2011). **Results:** We reviewed the clinical records and conducted a survey of 149 patients between 17 to 56 years with a mean age of 32.7 years. Within the population studied 55% were single, 1.2-parous and 78% were monogamous during IUD use. Among the diseases based on 28% of the population were obese (BMI >30) and 8% were hypertensive. During the monitoring period, the complications most frequently mentioned were: pelvic algia and dysmenorrhea (17.4%), vaginal infections (16.7%) and red flow alterations (16.1%). Most of them occurred in the first two years of use. Pelvic inflammatory processes were presented in a 4.69% of the patients, all responded well to outpatient antibiotic treatment. The IUD was expelled for 9.3% of patients. Sexual dysfunction was presented by 5%. In the study population 9 pregnancies occurred, of which 4 were for abortions, 3 pregnancies intrauterine and 2 ectopic pregnancies, all these occurred in an average of 1.5 years. Pearl Index arises to 2.8. 20% of patients have more than one complication and most of these complications occurred before 6 years of use. 31% of patients withdrew the IUD and 22% was for desire future pregnancy. Despite all complications 90% of patients recommended. **Conclusions:** In our patients IUD users, despite the considerable number of complications and failures of the method, 90% of them recommended. The patience preferred this method because of and easy access, reduced chekups and because it is highly effective.

DEPARTAMENTO DE PSIQUIATRÍA Y SALUD MENTAL

20° CONGRESO EUROPEO DE PSIQUIATRÍA - PRAGA, REPÚBLICA CHECA

NEUROTICISM AS A PREDICTOR OF IMPULSIVE AGGRESSION RESPONSE TO FLUOXETINE IN BORDERLINE PERSONALITY DISORDER.

H. Silva, J. Villarroel, S. Jerez, M. Bustamante, C. Montes, M. Igor

Introduction: Borderline personality disorder (BPD) is characterized by impulsivity with emotional and behavioral dysregulation. Inappropriate anger becomes a central problem of these patients who underwent aggressive behavior against themselves or against other. Impulsive aggression has been consistently related with serotonergic dysfunction. Drug therapy with SSRIs has proven effective in treatment of impulsive aggression in varying amounts, but still there have not been described clinical predictors of good response to this treatment. It is known that neuroticism is a stable trait in BPD, also related to serotonergic dysfunction. Aims: To investigate the relationship between neuroticism and clinical response to fluoxetine in impulsive aggression in BPD. We hypothesized that the level of neuroticism at baseline may predict aggression response to pharmacologic treatment. Methods: 59 patients were recruited, all meet DSM IV criteria for BPD according to IPDE. They did not fulfill criteria for axis I diagnoses or other personality disorders. Patients were treated with fluoxetine (Prozac®) for 12 weeks, in doses 20 to 60mg. Aggression was measured with OAS-M. Temperament was evaluated with NEO-PI-R. Results: Multiple regression analysis of OAS-M reduction at endpoint as dependent variable, and temperament as independent variables shown a significant predictive model with neuroticism as an inverse predictor factor ($\beta=-0.36$, $p=0.005$). We discuss that high levels of neuroticism at baseline can predict lower aggression response to fluoxetine, perhaps due to the relationship of both disorders with serotonergic dysfunction. Conclusions: We can conclude that neuroticism is a relevant predictor of impulsive aggression response to treatment with SSRIs in BPD.

RELATION BETWEEN NEUROTICISM AND SUICIDE RESPONSE TO FLUOXETINE IN BORDERLINE PERSONALITY DISORDER.

H. Silva, J. Villarroel, S. Jerez, M. Bustamante, C. Montes, M. Igor

Introduction: Suicide prediction is a clinical challenge in psychiatry, especially in borderline personality disorder (BPD) which presents a wide range of self injurious behaviors including consummated suicide. Interviews based on biographical and clinical factors are insufficient in suicide prevention. Treatment with SSRIs is accepted as effective to reduce ideation and suicidal behavior in BPD and other diagnoses. Aims: To evaluate the relation between neuroticism and suicide response to SSRIs in BPD. Method: 59 patients were recruited, all meet DSM IV criteria for BPD according to IPDE. They did not fulfill criteria for axis I diagnoses or other personality disorders at the moment of the evaluation. Patients were treated with fluoxetine (Prozac®) for 12 weeks, in doses 20 to 60mg. Suicidality was evaluated with OAS-M self aggression score (ideation and conduct measurement). Temperament was evaluated with NEO-PI-R. Results: Multiple regression analysis of OAS-M self aggression reduction at endpoint as dependent variable, and temperament as independent variables shown a significant predictive model with neuroticism as a direct predictor factor ($\beta=0.32$, $p=0.044$). Conclusions SSRIs are a useful treatment for suicidal behavior in BPD. Neuroticism is a good predictor of suicide response to SSRIs treatment in BPD.

RELATION BETWEEN SALIVARY CORTISOL LEVELS AND CORTICOTROPHIN RELEASING HORMONE RECEPTOR 1 (CRHR1) WITH ANTIDEPRESSANT RESPONSE TO FLUOXETINE IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER.

Herrera, LM; Symon, A; Heskia, C; Lara, P; Marin, F; Guajardo, V; Rojas, G; Araya, V; Fiedler, JL

Major depressive disorder is a serious mental disorder with high prevalence and recurrence rate. Once depression is diagnosed, effective pharmacological treatments must be rapidly initiated. Depression etiology and responsiveness to antidepressants have been related to the activity of the hypothalamic-pituitary-adrenal (HPA) axis. Depressed subjects do not respond equally to the same drug. This variability could be explained by interindividual genetic differences related to HPA axis, including CRHR1 receptor. Objectives: To associate the salivary cortisol levels, prior to antidepressant treatment, and the CRHR1 rs242939 polymorphism with the response to therapy with fluoxetine. Methods: We performed a pharmacogenetic prospective longitudinal study including clinic follow-up, endocrine and genetic evaluations. After diagnosis, patients started the pharmacotherapy. The severity of the disease and clinical response were evaluated by the Hamilton Depression Rating Scale (HAM-D). Rapid and slow responses were considered as reductions in the HAM-D scores of at least 50% at the third and eight weeks respectively. Results: 157 patients were recruited. Salivary cortisol levels at 8:00AM were lower in rapid responders than in not responders (p -value = 0.0122). No differences were observed after eight weeks of treatment. The rs242939 polymorphism was in Hardy Weinberg equilibrium ($p=0,24$) and was significantly associated with early response ($p=0.019$). There was no association after two month of therapy.

Discussion and conclusions: Alterations in the CRHR1 receptor may significantly impact the regulation of stress response. The association observed in this study may be related with some refractoriness in the regulation of CRHR1 gene in non responders.

CENTRO DE IMAGENOLÓGÍA

EUROPEAN CONGRESS ON OSTEOPOROSIS & OSTEOARTHRITIS - BORDEAUX, FRANCIA

SARCOPENIA IS MORE IMPORTANT THAN VITAMIN D DEFICIENCY AS DETERMINANT OF OSTEOPOROSIS IN CHILEAN ELDERS.

Cecilia Albala, Lydia Lera, Hugo Sánchez, Bárbara Angel, Alejandra Fuentes, Patricia Arroyo

Objective(s): To study the frequency of osteoporosis and its association with vitamin D and sarcopenia in community living Chilean elders. Material & Methods: Cross-sectional study in 741 participants in the ALEXANDROS study aged 60 and older (66.9% women, mean age 70.2±7.6 y, min 60 y, max 99 y) residing in Santiago, Chile. Socioeconomic characteristics, history of chronic diseases and self-reported disability/functional limitations were registered. Physical performance, anthropometry, dynamometry, biochemical exams, vitamin D levels and DXA scan were performed. WHO standards for BMD classified them in normal, osteopenia and osteoporosis. Being under p25 of baseline value was defined as low dynamometry. Participants were classified as Sarcopenic using the skeletal muscle mass index (SMI) calculated as appendicular skeletal muscle mass/height² based on sex-specific lowest 20%. Plasma levels of 25-hydroxyvitamin D (VitD) were determined by radioimmunoassay and VitD deficiency was defined as <50 nmol/L.

SERVICIO DE ANATOMÍA PATOLÓGICA

5TH LATIN AMERICAN CONFERENCE ON LUNG CANCER – RIO DE JANEIRO, BRASIL

DIAGNOSIS OF PLEURAL DISEASES USING IMMUNOHISTOCHEMISTRY (IH) ON CELULAR BLOCK (CB) IN ALCOHOL-PRESERVED MALIGNANT PLEURAL EFFUSION: A DESCRIPTIVE STUDY.

Barcos P, Fernández C, Gallegos I, Zapata S.

Introduction: The celular block (CB) is a less invasive technique than surgical pleural biopsy (SPB) for the malignant pleural effusion diagnosis. The immunohistochemistry (IH) could improve the diagnostic performance of CB and reduce futile diagnostic surgery. Several studies refer that alcohol-preserved samples are not useful to perform IH. However with new antibodies and the improvement of antigen retrieval we can perform diagnostic IH markers in alcohol preserves samples with a good diagnostic result. Methods: all patients with pleural effusion evaluated by pleurocentesis with CB and SPB between 2009 and 2011 at the Instituto Nacional del Tórax (INT) where included in this study. Histologic and cytologic diagnostic was made to every SPB and CB by two different pathologist. IH to CB and SPB samples was performed with antibodies MOC-31, Calretinin and D-240. The pathologist who performed IH for CB was blind to final SPB diagnosis. Results: 38 patients were included in this study. Six mesotheliomas, 25 adenocarcinomas (1 adenocarcinoma with reactive mesothelial hyperplasia, and 2 signet ring adenocarcinomas), 4 carcinomas NOS, 3 epithelioid malignant tumors unable to differentiate between mesothelioma and adenocarcinoma. Mesotheliomas expressed calretinin in 4 of 6 cases (63%) of SPB and 5 of 6 (83%) of CB. MOC-31 was negative in 5 of 6 (83%) of the cases of SPB and 6 of 6 (100%) in CB. D-240 was observed in 5 of 6 (83%) of the cases of SPB and 4 of 6 (66%) of CB. In adenocarcinomas, Calretinin was negative in all 25 cases (100%) of SPB and CB. MOC-31 was positive in 21 of 25 (84%) in SPB and 17 of 25 (68%) in CB. D-240 was negative. Conclusion: the use of IH in CB samples is a possible and a promising diagnostic tool. There is acceptable agreement between IH results of CB and SPB. The IH in CB samples can improve the diagnostic performance in patients with malignant pleural effusion. The most important value of this technique is its high post test probability in cases of Adenocarcinoma or Mesothelioma IH conclusion.

MALIGNANT PLEURAL MESOTHELIOMA AND ERCC1 EXPRESSION.

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Introduction: Advanced Malignant Pleural Mesothelioma (MPM) is a poor prognosis disease for which better treatment options and prognostic factors are urgently needed. Our study was to investigate the potential role of ERCC1 protein status as a prognostic factor in untreated patients with advanced MPM. Methods: The study population consisted of 62 inoperable patients with advanced

MPM enrolled between January 2003 and August 2010. 120 patients were diagnosed as mesothelioma. The inclusion criteria of this study were available paraffin biopsies, diagnosis supported by immunohistochemical techniques of advanced-stage patients. None of the patients received chemotherapy due to non coverage by Chilean public health system. All the patients received best supportive care. ERCC1 expression as a prognostic factor was evaluated by immunohistochemistry (IHC) on the formalin-fixed paraffin-embedded diagnostic biopsies. Two pathologists independently assessed evaluated ERCC1 staining and discordant cases were reviewed. The tumor samples were separated according to this cutoff point into ERCC1-negative (H-score \leq median) and ERCC1-positive (H-score $>$ median) cases. The survival was calculated with de Kaplan Myer and chi square statistic method. Other histological features like necrosis, mitosis, conspicuous nucleolus were evaluated and associated with survival in the group studied. Results: A total of 120 patients with biopsy diagnosis of mesothelioma were found. 62 met inclusion criteria. Tumor type at the pleural biopsy is shown in figure 1. The survival was between 1 and 29 months (median 6 months). There were 71% ERCC1 negative cases, and 29% ERCC1 Positive cases. Survival analysis with the cut of \geq 6 months were 37% in the positive group and 58% in the negative group. Desmoplastic and sarcomatoid histological subtypes were negative for ERCC1 (100%). Epithelioid histological subtype was positive to ERCC1 in 41% cases, while bifasic 29%. Conclusions: The immunohistochemical status for ERCC1 is not a survival prognostic factor in untreated mesothelioma patients with advanced disease. In our series all cases of desmoplastic and sarcomatoid histological subtypes are negative for immunohistochemical determination ERCC1 (100%). No other histologic feature is predictive for ERCC1 immunohistochemical status. There are studies that show positive correlation between immunohistochemical negative immunohistochemical status and chemotherapy response in mesothelioma patients with advanced disease. So, we suggest to determinate the immunohistochemical status for ERCC1 in patients with epithelial and bifasic histological subtypes.

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DETERMINATION OF THE HER2 EXPRESSION IN CHILEAN PATIENTS WITH GASTRIC CANCER.

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Introduction: Gastric Cancer is a common disease in Chile, with one of the highest mortality rates related to this diagnosis in the world, 20 per 100,000 people). Some years ago groups studied the expression of HER2, for prognostic and therapeutic implications. A recently published ToGa study demonstrated the benefits in the overall survival in patients with overexpression of the mentioned receptor treated with trastuzumab combined and chemotherapy, overexpression presented in 20% of the studied population. In Chile, the frequency of this expression is unknown. The objective of this study is determine the frequency of the HER2 overexpression in gastric cancer patients diagnosed at the Hospital of the University of Chile in the different stages of diagnosis. Methods: Descriptive, retrospective study, in which the clinical history and tumor samples from patients with gastric cancer diagnosed between 2008 and 2010 was collected prior informed consent. There were 73 samples analyzed, obtained from tissue blocks in paraffin. Cuts of 4 microns thick were performed and placed on slides impregnated in xylene. For the immunohistochemical study it was used the commercial kit HercepTest® (DAKO). Results: We studied 73 patients studied, 50 men (68%) and 23 women (32%). They corresponded to stage I 8,2%, stage II 12,3%, stage III 34,2% and stage IV 45,8% (AJCC Cancer Staging Manual, 6° edition 2002). All of them were adenocarcinoma. Regarding the HER2 status, six cases (8%) had full staining of the high intensity membrane (score 3+), 3 cases had full staining but with low to moderate intensity (score 2+) and 2 cases presented a focal and incomplete pattern of the membrane (score 1+). Among the cases with scores 3+, 2 had an homogeneous staining pattern in the sample, while the rest was with an heterogeneous pattern. From the 6 positive cases, two were mildly differentiated and the rest poorly differentiated. Three of the six samples corresponded to the intestinal type, whereas was diffuse. Likewise, among the positive cases, 4 were stage IV, one in stage III and one in stage II. The 3 cases with HercepTest 2+ were studied with FISH, one resulted positive and the other two samples were unsatisfactory. Finally, the positivity for HER 2 in this study was of 7 cases (6 IHQ 3+ and one case 2+ FISH positive) corresponding to 10%, a lower figure than the reported by other studies. Conclusion: The frequency of the HER 2 overexpression in Chile is lower than the series published in other countries, but similar to the Latin-American series.