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Revista electrónica científica

y académica de Clínica Alemana

Especial Abstracts | **2019**

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Publicación bimestral

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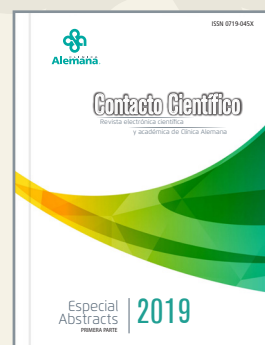
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Cuando el conocimiento tiene cada vez más peso

Dr. Fernando Cádiz

Editor jefe

Revista Contacto Científico

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Generar conocimiento cobra cada vez una mayor importancia como factor diferenciador, algo a lo que no están ajenas las instituciones del sector salud. Este año Clínica Alemana ocupó nuevamente el segundo lugar del ranking de los mejores hospitales y clínicas de Latinoamérica 2019 realizado por AméricaEconomía. El artículo central que acompaña la publicación de la versión número once del estudio se titula "El peso del conocimiento", evidenciando el importante papel que su desarrollo juega a la hora de identificar a los mejores.

Contribuir al desarrollo de conocimiento médico en beneficio de la comunidad, es uno de los

pilares de la misión de Clínica Alemana. Hacerlo de manera sustentable e innovadora en todos sus ámbitos de acción, aumenta el desafío. Como Departamento Científico Docente nuestra misión es el perfeccionamiento continuo de los profesionales de la salud de CAS y la generación y transmisión de conocimiento médico.

Que la generación de conocimiento se encuentre en nuestro ADN institucional es un primer y sólido paso para el quehacer médico. Tenemos la responsabilidad de impulsar el desarrollo de proyectos, la investigación, trabajos que se traduzcan en el descubrimiento de



nuevas y mejores formas de prevenir, controlar y tratar problemas de salud. Para esto nuestro departamento cuenta con profesionales y recursos disponibles en análisis de datos, generar bases de datos, edición y traducción, entre otros.

El año pasado incorporamos en nuestra revista Contacto Científico la publicación de abstracts presentados por nuestros médicos y profesionales de la salud en congresos y cursos, tanto a nivel nacional como en el extranjero. Esta vitrina nos permite compartir líneas de trabajo e investigación de equipos de distintas especialidades, lo que creemos

aporta valor para seguir avanzando y potencialmente motivar a otros a participar de estos proyectos o generar nuevos. Por esto, repetimos esta iniciativa y a continuación compartimos en este número especial abstracts presentados por nuestros médicos.

La invitación queda extendida, para que nos hagan llegar sus trabajos 2020 e ir transformando juntos este espacio en una edición que cobre cada vez más fuerza.

Abstract 1.

Breast implants late collections, ultrasound approach

María Flavia Pizzolon, Marcela Uchida, Eugenio Soto.

Presentado en 25th European Congress of Radiology, Voice of EPOS, 27 febrero – 3 de marzo 2019, Viena, Austria.

Abstract

Learning objectives

Characterize the features of peri-implant collection by ultrasound and evaluate their etiology and time of onset.

Background

Breast augmentation using silicone implants is the most common cosmetic and reconstructive surgical procedure. Reported complications of breast implants are around 20%. They include capsular contracture and implant failure, late seromas and breast implant-associated lymphoma, are also described, but are rare.

Findings and procedure details

From January 2014 to September 2018, we reviewed ultrasound characteristics, results of fine needle aspiration (FNA) or Core biopsy (CB) of peri-implants collection. Thirty-four patients were found (31 augmentations and 3 reconstructions). The average age was 43,7 years (range 25 to 72).

In the 34 patients a total of 48 ultrasound guided interventions were done, 46 FNA and 2 CB. In 10 patients

there were double aspirations, and in three patients triple. The average interval from the surgery to the seroma onset was 7 years (range 1 to 17). All cases were unilateral. The drained volume ranges from 5- 500 cc. The ultrasound appearance was fluid in thirty-two cases (59% anechoic, 41% internal echoes), the solid masses were irregular, not circumscribed, heterogeneous, vascularized and were categorized BI-RADS 4.

All the cases were benign, mostly non-specific inflammatory changes, one haematoma, two cases of infection, the histology of core biopsies corresponded to granulomatous unspecific reaction and pseudocapsula with inflammatory changes.

Conclusion

Peri-implant collections are an infrequent remote complication. The ultrasound is a very valuable tool because allows diagnostic and treatment. Most of the cases were fluid and all of them benign.

Abstract 2.

Acellular Stem Cell Derivatives for the Treatment of Muscle Injuries: A New Paradigm?

Experimental in-vivo animal study

Dr. Alex Vaisman, Dr. Rodrigo Guiloff, Dr. Javier Oyarce, Dr. David Figueroa,
Dr. Rafael Calvo, PhD Paulette Conget

Presentado en American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting,
12-16 de marzo de 2019, Las Vegas, Estados Unidos.

Abstract

Introduction

Acellular Stem Cell Derivatives (ASCD) have demonstrated anti-inflammatory and anti-fibrogenic properties, therefore they have a biological potential in the healing process of muscle injuries.

Purpose

To evaluate the effect of an ASCD local administration in the healing process of an animal muscle injury model.

Hypothesis

Local administration of ASCD favors muscle repair, because it decreases fibrotic tissue and increases the amount of regenerative muscle fibers.

Methods

Experimental in-vivo study in fifty-two male mice (age: 4-6 months). A complete mid-section in the right quadriceps was done on all subjects. Left quadriceps were left for

the control group without intervention (group 5). Alpha-Mem, the same culture medium in which Stem Cells were cultivated, was used as the intervened control group and 3 different doses of ASCD were tested (low, medium and high). Interventions were locally administrated in an acute muscle injury (A=just after muscle section) or a delayed muscle injury (D=14 days after muscle section). The mice were randomly assigned to the following intervention groups:

- 1A y 1D (control, n=10): Alpha-Mem 50ul.
- 2A y 2D (ASCD low dose, n=14): ASCD 0,2 mg (10ul).
- 3A y 3D (ASCD medium dose, n=14): ASCD 0,5mg (25ul).
- 4A y 4D (ASCD high dose, n=14): ASCD 1mg (50ul).

All animals were sacrificed 28 days after muscle section for macroscopic and histologic evaluations of both quadriceps, the last, by a blinded pathologist. Statistical analysis included the ANOVA and Kruskal-Wallis tests ($p < 0.05$) and an 80% of statistical power was considered.

Results

Macroscopic evaluation: group 4D presented significantly higher mass and significantly less atrophy and fibrosis than the other intervention groups ($p=0.0001$; $p=0.0363$; $p=0.0001$ respectively). There were no significant differences for muscle mass and thickness between groups 4D and 5 (non-intervened muscle) ($p=0.454$; $p=0.060$). Group 4A also did not presented significant differences in muscle thickness with group 5 ($p=0.068$). All other groups presented significantly less mass and thickness than group 5.

Histologic analysis: group 4D presented significantly less fibrosis than the other intervened groups ($p=0.0004$).

Conclusion

In this animal model, local infiltration of high dose ASCD at 14 days from the muscle injury, favored muscle healing process by decreasing muscle atrophy and fibrotic tissue.

Clinical Relevance

Favoring muscle repair with less fibrotic tissue and atrophy could lead to a safer return to sports.

Key Concepts

Muscle healing - Acellular Stem Cell Derivatives – Fibrosis



Abstract 3.

Feasibility and effect of remote ambulatory heart rhythm monitoring pre and post TAVI

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Hamilton Health Sciences, Population Health Research Institute, McMaster University, Hamilton, Ontario.

Presentado en el American Congress of Cardiology (ACC 2019), 16 al 18 de marzo, Nueva Orleans, Estados Unidos, como becado de McMaster.

Abstract

Background: Heart rhythm abnormalities, including advanced conduction delay and atrial fibrillation, are common complications following TAVI. Ambulatory cardiac monitoring (ACM) could help identify conduction abnormalities and reduce the need for unplanned, urgent pacemaker implant following TAVI.

Methods: Retrospective analysis of patients undergoing TAVI (June 2017-July 2018) at a single Canadian hospital that underwent 14-day ACM with "near-real-time" alerts if rhythm abnormalities are found (m-Health Solutions). Patients were fitted with ACM at TAVI planning clinic and/or at hospital discharge post TAVI.

Results: Of 151 patients that underwent TAVI, 39 patients had pre-TAVI ACM.

Patients were selected if they had RBBB, slow atrial fibrillation (AF), bi/trifascicular block or according to physician preference. In this group, ECG findings were: 26% AF, 26% first degree AV block, 19% bundle branch block and wide QRS in 7%. One patient had bifascicular and one had trifascicular block.

Pre-TAVI ACM was abnormal in 39% with high-grade AV block in 15%. This led to PPM in 5 patients. These patients had a mean hospital stay of 1.3 days. Also, asymptomatic AF was found in one patient that led to anticoagulation. Mean hospital stay post TAVI in whole cohort was 1.4 days.

23 patients received post-TAVI ACM. Patients were selected if they had transient high degree block, bundle branch block or according to physician preference. Post procedural ECG showed new AF in 8%, persistent PR prolongation in 8%, new persistent bundle branch block in 21% and new axis deviation in 13%. ACM was abnormal in 70% of patients: with high degree AV block in one patient requiring PPM. PPM implantation rate in the whole one-year cohort was 6.6%.

Conclusion: In this exploratory analysis, incorporation of ambulatory ACM in routine TAVI practice was feasible and identified rhythm abnormalities in 40% of patients pre and 70% of patients post TAVI. Most importantly, ACM identified advanced conduction delay leading to planned PPM implant prior to TAVI, potentially reducing post procedural PPM rates and allowing early discharge. Based on these findings we have initiated a clinical trial routinely enrolling patients pre and post TAVI.



Abstract 4.

“Real world” and objective analysis of PD-L1 immunohistochemistry in transbronchial and EBUS-TBNA samples from NSCLC patients from a Chilean tertiary hospital.

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Presentado en USCAP 108th Annual Meeting 2019, 16 al 21 de marzo, National Harbor, Maryland, Estados Unidos.
Publicado en Revista Modern Pathology (32,1-76 2019).

Abstract

Introduction

Small biopsies are routinely obtained during diagnostic work-up of NSCLC. Recently, endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) biopsies have become available. However, the performance of immunohistochemistry biomarker PD-L1 has not been thoroughly studied in this sample type. Here, we assessed the relationship and agreement of PD-L1 scores in transbronchial (TB) tumor biopsies and EBUS-TBNA from positive lymph nodes using traditional pathologist evaluation and an objective platform for IHC quantification in a series of NSCLC patients.

Methods

IHC slides for PD-L1 (E1L3N) including TB samples from tumor and EBUS specimens from positive lymph nodes from 24 NSCLC patients diagnosed at a Chilean tertiary hospital were evaluated by 2 pathologists (P1 and P2) and scanned using an Aperio® AT2 scanner (Leica). Slides were scored by pathologists using a 5-tier scale using current guidelines for interpretation of PD-L1 in NSCLC. For digital analysis, tumor and cell groups were selected by a trained operator. Areas were analyzed using FDA-approved algorithms for membrane positive pixel counting. We correlated the percentage scoring for TB and EBUS using linear regression

coefficients (R2) and analyzed its consistency for both pathologists and digital operator (DO) using intraclass correlation (ICC). All tests were two-sided.

Results

P1 and P2 rejected 2 and 3 EBUS cases as insufficient, respectively. One case was excluded from digital analysis due to absence of cell clusters that prevented area selection (range of tumor cells detected: 380-9475 for TB, 280-47237 for EBUS). There was a positive relationship for PD-L1 scoring between TB and EBUS across observers (R2=0.37 for P1, 0.58 for P2 and 0.25 for DO). Agreement was high between pathologists for TB and EBUS scoring (TB ICC=0.96; EBUS ICC=0.99). However, when pathologists compared to

DO, agreement was moderate for TB (P1 vs DO ICC=0.64; P2 vs DO ICC=0.62) and EBUS (P1 vs DO ICC=0.54; P2 vs DO ICC=0.49).

Conclusion

There is a positive correlation for PD-L1 expression in TB tumor and EBUS lymph node biopsies using traditional pathologist and objective evaluation. High agreement is present in both groups for pathologist scoring, but it falls to moderate when a digital operator is included. Objective IHC analysis shows promising results, but issues with tissue recognition need to be solved. EBUS-TBNA samples are suitable specimens for IHC assessment of PD-L1 in NSCLC.



Abstract 5.

Nonfunctional pituitary adenoma diagnosed during pregnancy with progressive visual impairment: a clinical case

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Presentado en 16th International Pituitary Congress, 20-22 marzo 2019, New Orleans, Louisiana, Estados Unidos.

Abstract

Nonfunctional pituitary adenomas (NPA) have an incidence of 0.59 cases /100.000 pregnancies in the UK. It can be previously known or newly diagnosed with symptoms of enlargement; only few cases have been described with visual impairment, treated with either cabergoline or surgery. We present a case of NPA diagnosed during pregnancy with chiasmatic compression that required surgery.

Clinical case

A 37-yr-old woman was evaluated with history of 3 months of visual disturbance. On examination, visual acuity was reduced on right associated to an afferent pupil defect and paracentral scotomas on campimetry. Patient refused MRI because she suspected pregnancy. She came back two months later coursing 13th week pregnancy with progression of visual field defects and a new campimetry showed enlargement of paracentral scotomas on the right eye. Non-enhanced MRI showed a 19 x 21 mm pituitary

mass compressing the left optic nerve and chiasm. Patient denied headache, previous oligomenorrhoea or galactorrea. Hormonal evaluation showed: prolactin 37.2ng/ml (NV <25), TSH 3.6uU/ml, fT4 0.89ng/dl (NV 0.93-1.7), IGF-1 91.7ng/ml (NV 57-241), cortisol 11.8µg/dl and 25.7µg/dl post ACTH stimulation test. Since visual symptoms were present two months before pregnancy and visual field defects were confirmed at the beginning of pregnancy, we assumed cabergoline treatment could not solve the compression of optic nerve and chiasm. Transphenoidal resection was performed without any complication. Biopsy showed null cells adenoma with ki67 4%. One month after surgery,

campimetry was normal. A healthy child was delivered at 39 weeks of gestation. Two months after delivery, MRI showed no residual tumor, campimetry persist normal and the patient had normal pituitary function and normal breast-feeding.

Conclusion

Management of NPA with visual field defect during pregnancy is a challenge. Our case presented with unusual early visual field defects and this could be a reason to prefer surgery instead of cabergoline.



Abstract 6.

Ceftaroline Susceptibility by Four Different Methods Using EUCAST and CLSI Breakpoints in Clinical Isolates of Methicillin-Resistant *Staphylococcus aureus* (MRSA)

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Presentado en 29th European Congress of Clinical Microbiology & Infectious Diseases, ECCMID 2019, 13 al 16 de abril, Amsterdam, Holanda.

ABSTRACT

Background

Recent data raised concerns regarding the performance of disk diffusion (DD) and gradient strips for detecting CPT non-susceptible *S. aureus* (Cantón2017). Additionally, EUCAST and CLSI's DD method recommend different CPT concentrations (5 and 30µg, respectively). Both agencies consider a minimum inhibitory concentration (MIC) of <1µg/mL as susceptible, but CLSI proposes an MIC of 2µg/mL as intermediate and >2µg/mL as CPT-resistant. In contrast, EUCAST catalogues an MIC >1µg/mL as CPT-resistant.

Aim

To compare CPT susceptibility obtained by E-test and DD to standard broth microdilution (BMD) in clinical MRSA isolates using EUCAST and CLSI breakpoints.

Methods

We analyzed 293 clinical MRSA isolates collected from 1999-2018 in Santiago, Chile. Identification was confirmed by MALDI-TOF. Susceptibilities were performed at a centralized lab. BMD and DD30µg were performed following CLSI and DD5µg as per EUCAST guidance. Etest was performed

following the manufacturers' instructions. Categorical agreement (CA), essential agreement (EA), major errors (ME) and very major errors (VME) were evaluated. Susceptibilities were analyzed using EUCAST and CLSI breakpoints.

Results

The MIC₅₀/MIC₉₀ by BMD was 2/2µg/dL; only 107 (36%) isolates had an MIC <1µg/mL (CPT-susceptible). A total 186 (64%) isolates exhibited an MIC >1µg/mL, considered CPT-resistant by EUCAST. Of these, 178 (61%) isolates fell in CLSI's intermediate (2 µg/dL) and 8 in the CPT-resistant category (>2µg/mL). The MIC₅₀/MIC₉₀ with Etest was 1/2 µg/dL, with 204 (70%) CPT-susceptible isolates. The Etest MIC of the remaining 89 (70%) isolates was 2 µg/dL. DD5µg and DD30µg catalogued 44 (15%) and 258 (88%) isolates as CPT-

susceptible, respectively. While DD5µg regarded 249 (85%) as CPT-resistant, only 2 (1%) were CPT-resistant and 33 (11%) were CPT-intermediate with DD30µg. The CA, EA, ME and VME between Etest and BMD was 53-97-7-40% for EUCAST, and 52-97-0-2% for CLSI. The CA-ME-VME for DD5µg and DD30µg were 77-22-1% and 43-0.3-2%, respectively.

Conclusion

CPT activity against Chilean isolates of MRSA was modest. All susceptibility methods evaluated exhibited a poor performance regardless of the breakpoint used. Although Etest showed a high EA, CA was only ca. 50% and the proportion of VME with EUCAST was worrisomely high. DD5µg outperformed DD30 µg, but overcalling of CPT-resistance was frequent.



Abstract 7.

Lithium treatment for unipolar major depressive disorder: systematic review and meta-analysis

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Presentado en 74th Annual Meeting of the Society of Biological Psychiatry (SOBP), 16-18 mayo 2019, Chicago, Estados Unidos.

Abstract

Background

The potential value of lithium treatment in particular aspects of unipolar major depressive disorder remains uncertain.

Methods

With reports of controlled trials identified by systematic searching of Medline, Cochrane Library, and PsycINFO literature databases, we summarized responses with lithium and controls followed by selective random-effects meta-analyses.

Results

We identified 36 reports with 39 randomized controlled trials: six for monotherapy and 12 for adding lithium to antidepressants for acute major depression, and 21 for

long-term treatment. Data for monotherapy of acute depression were few and inconclusive. As an adjunct to antidepressants, lithium was much more effective than placebo ($p < 0.0001$). For long-term maintenance treatment, lithium was more effective than placebo in monotherapy ($p = 0.011$) and to supplement antidepressants ($p = 0.038$), and indistinguishable from antidepressant monotherapy.

Conclusions

The findings indicate efficacy of lithium as a treatment for some aspects of major depressive disorder, especially as an add-on to antidepressants and for long-term prophylaxis. It remains uncertain whether some benefits of lithium treatment occur with many major depressive disorder patients, or if efficacy is particular to a subgroup with bipolar disorder-like characteristics or mixed-features.

Abstract 8.

Muscle mass and mortality in cancer patients

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Presentado en 2019 ASCO Annual Meeting, 31 de mayo – 4 de junio 2019, Chicago, Estados Unidos.

Abstract

Background

Detection and prevention of cancer cachexia during oncologic treatment is an important issue in cancer patients care.

Aim

To analyze the relation between overall survival and nutritional status assessed both by subjective and objective methods, in a prospective cohort of oncologic patients.

Methods

Between 2012-2014 all patients under treatment in the Oncology Unit of Clínica Alemana de Santiago were invited to participate in this study, and follow-up was completed

August 2018. Exclusion criteria were terminal phase patients, or those with cognitive deterioration. Apart from recording demographic, clinical and nutritional data, whenever possible, recent computed tomographic images were analyzed through Slice O Matic, at the level of the third lumbar vertebra, for measurement of abdominal fat and muscle area. Muscle Mass Index (MMI) was calculated as muscle area/squared height. The control group was composed by 130 healthy subjects 18-40 years, whose computed tomography images were obtained as part of the trauma protocol. The cutoff for sarcopenia was MMI < -1 SD respect control subjects. In addition, nutritional status was assessed through anthropometric measurements and the Patient Generated Subjective Global Assessment (VGSGP).

Results

We included 103 patients, predominant cancer sites were digestive, haematologic and lung; average survival was 33 ± 23 months. The sample was divided in 2 groups (TNM stages 1 and 2 versus 3 and 4). MMI in control subjects was significantly higher than values obtained from 64 oncologic patients with available CT scans, while fat area, specifically visceral, was the opposite. VGSGP scores correlated negatively and significantly with MMI ($p < 0.001$). According to univariate analysis, survival time was inversely associated with age among male patients ($p = 0.002$), cancer stage

in both genders ($p < 0.01$), VGSGP ($p < 0.01$), and positively associated with MMI, only among men ($p = 4$). Kaplan Meir survival estimates were significant both sarcopenia and cancer stage. According to Cox regression, both sarcopenia and cancer stage were significant predictors of mortality, without any effect of age or sex.

Conclusions

Both sarcopenia and cancer stage are predictors of survival during treatment of cancer.



Abstract 9.

Correlación a largo plazo entre la oblicuidad pelviana y la evolución de la cirugía de preservación de caderas, en pacientes con parálisis cerebral infantil

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Presentado en XIII Congreso Anual Sociedad Española de Ortopedia Pediátrica SEOP-Madrid, 5-7 de junio 2019, Madrid, España.

Abstract

Introducción

El manejo de la cadera espástica en niños con parálisis cerebral infantil (PCI) conlleva un gran desafío. La correcta interpretación de las imágenes, valoración de los parámetros de evolución, y determinar con precisión los niveles sobre cuáles actuar, representan un desafío al planificar una cirugía. Al comprenderlos en el largo plazo entenderíamos su relevancia.

Objetivos

Evaluar resultados radiográficos a largo plazo tras cirugía reconstructiva de cadera espástica.

Relacionar la evolución de la oblicuidad y rotación pélvica tras la cirugía.

Analizar las complicaciones asociadas a los procedimientos.

Material y método

Estudio retrospectivo de pacientes PCI sometidos como primera intervención, a cirugía reconstructiva de cadera (osteotomía femoral de centraje, osteotomía acetabular) entre los años 2008 y 2017, con seguimiento mínimo de 19 meses clínico y radiológico. Se recopilaron datos demográficos (edad, sexo, GMFCS, tipo de cirugía, etc.). Se analizaron las radiografías mediante oblicuidad y ascenso pelviano, centraje y cobertura (índice de Reimers), grado de displasia acetabular, y presencia de complicaciones como pseudoartrosis o necrosis. Además se incluyó la necesidad de cirugía de revisión.

Resultados

Cumplieron criterios 22 pacientes, representando 27 caderas, mediana de seguimiento 6 años. Edad promedio

9 años a la cirugía. 41% sexo femenino. Distribución según GMFCS: Grupo III (3), IV (9) y V (10).

100% de evolución favorable al corto plazo; sólo un 27% requirió algún procedimiento óseo a mediano o largo plazo. 36% del total no presentaba una oblicuidad pelviana alterada; un 23% sí la tenía pero no fue corregida; 18% fue corregida y se mantuvo, y 23% fue corregida y recidivó.

De los reintervenidos, el 50% tuvo oblicuidad pélvica alterada no corregida. No obstante, del otro 50% dos tercios sí fue corregida pero recidivó ipsilateral y el otro tercio sólo

se alteró la contralateral posteriormente. Al relacionarla con la displasia acetabular, de aquellos con recidiva de ésta, sólo 33% tuvo una oblicuidad pelviana no corregida. Lo mismo, de quienes desarrollaron necrosis a largo plazo sólo un 25% no tuvo corrección de la oblicuidad.

Conclusiones

El éxito de estas intervenciones supera el 73%. De aquellos con mala evolución, en las reintervenciones sí tuvo relevancia no corregir la oblicuidad pelviana. No obstante, no fue relevante al relacionarla con la recidiva de la displasia acetabular, como tampoco con la aparición de necrosis.

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Abstract 10.

Evolución de la cirugía de preservación de caderas en pacientes con parálisis cerebral

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Presentado en XIII Congreso Anual Sociedad Española de Ortopedia Pediátrica SEOP-Madrid, 5-7 de junio 2019, Madrid, España.

Abstract

Introducción

La patología de cadera en niños con parálisis cerebral (PC) presenta una elevada incidencia, sobre todo en pacientes con mayor afectación neurológica. El manejo de la cadera espástica conlleva un gran desafío. Realizar una cirugía de preservación de cadera, cuyo resultado inmediato sea óptimo, permite mantener una cadera estable a largo plazo. Con ello se pueden minimizar otros procedimientos, con resultados menos predecibles.

Objetivos

Evaluar resultados radiográficos mediante cobertura cefálica y desarrollo acetabular tras cirugía reconstructiva. Analizar las complicaciones asociadas a los procedimientos realizados.

Material y método

Estudio retrospectivo de pacientes PC desde 2008 al 2017, sometidos a cirugía reconstructiva de cadera (osteotomía femoral de centraje, osteotomía acetabular y capsulotomía medial). Seguimiento mínimo radiológico de 19 meses. Se recogieron datos demográficos (edad, sexo, GMFCS). Estudio radiográfico prequirúrgico y postquirúrgico a corto (6 meses) y largo plazo (seguimiento máximo) mediante índice de Reimers (IR), ángulo cérico-diafisario y grado de displasia acetabular. Necesidad de cirugía de revisión.

Resultados

Se analizaron 22 pacientes (27 caderas) que cumplieren los criterios. Edad media a la cirugía de 9 años y 59% sexo masculino. Según GMFCS, 3 fueron del grupo III, 9 del grupo

IV y 10 del grupo V. La media de seguimiento fue de 73 meses (19 – 87). La edad media al final del seguimiento fue de 14 años. El 100% tuvo buen resultado a corto plazo (primeros 6 meses), con un correcto centraje de las caderas. De ellas, un 73% evolucionó de forma favorable, sin necesidad de nuevas cirugías al final del seguimiento. El IR promedio prequirúrgico fue de 45-60% (5 – 100) y el postquirúrgico de 20%. La displasia acetabular se corrigió en 17 de los pacientes, de ellos en un 23% recidivó a largo plazo. De los pacientes intervenidos unilateralmente, 2 presentaron una luxación contralateral. Cuatro pacientes con GMFCS V tuvieron una recidiva de la luxación, de los

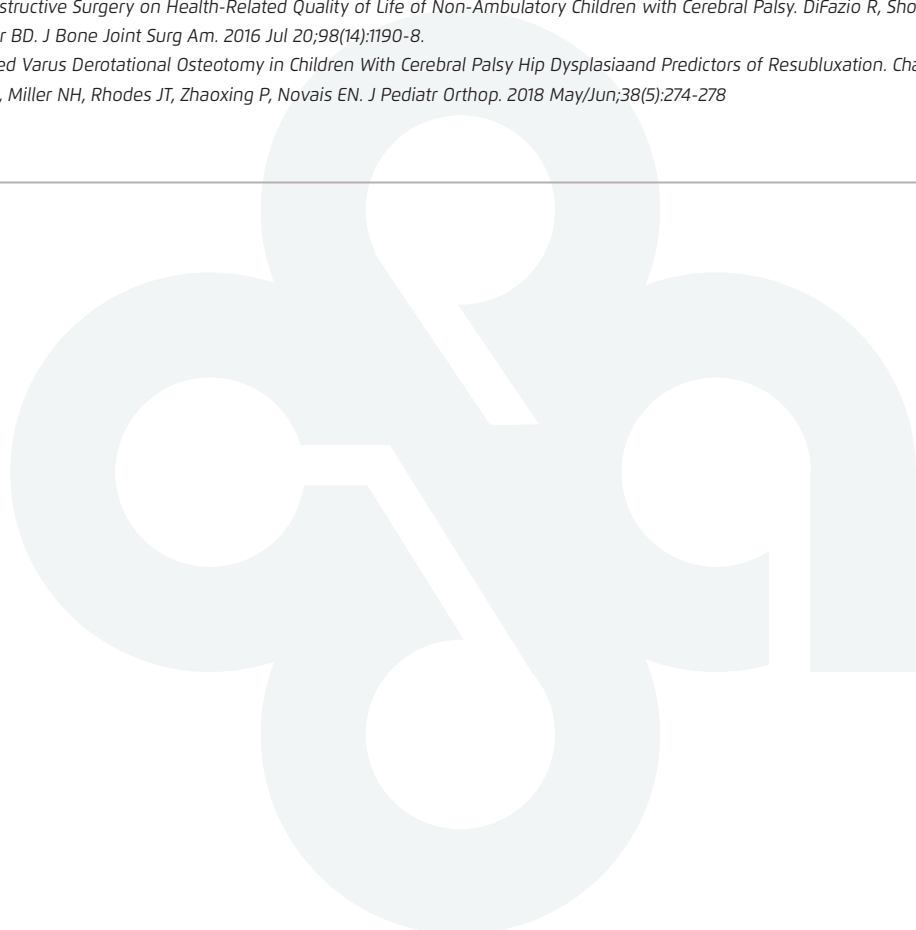
cuales 3 fueron sometidos a cirugía de salvamento por lesión del cartílago articular. Otras complicaciones fueron: una pseudoartrosis, un quiste alrededor de la placa y una fractura posterior a la extracción de la placa.

Conclusiones

La cirugía reconstructiva de cadera en pacientes con PCI permite mantener la cadera reducida a medio plazo. Los pacientes con GMFCS V presentan mayor riesgo de recidiva. En la mayoría de estos casos es preciso realizar cirugía de salvamento por lesión del cartílago articular.

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Abstract 11.

Efectividad de la cirugía de partes blandas para la displasia de cadera en niños con parálisis cerebral

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Presentado en XIII Congreso Anual Sociedad Española de Ortopedia Pediátrica SEOP-Madrid, 5-7 de junio 2019, Madrid, España.

Abstract

Introducción

La displasia de cadera (DC) que ocurre en niños con parálisis cerebral (PC) es evolutiva. Los pacientes habitualmente nacen con caderas normales y debido al desbalance muscular se van desarrollando alteraciones musculoesqueléticas que desencadenan una subluxación o luxación de cadera.

Objetivos

Evaluar la eficacia de la cirugía de partes blandas desde el punto de vista clínico y radiológico, en prevenir el desarrollo de la DC en niños con PC.

Material y método

Estudio prospectivo realizado entre 2014 y 2017, de pacientes con indicación de cirugía profiláctica de cadera. Criterios de inclusión: PCI espástica, GMFCS III-IV-V, signo de Thomas +, índice de Reimers (IR) > 20%. Criterios de exclusión: distonía, IR >60%. Se recogen datos demográficos, cuestionario a los cuidadores al final del seguimiento sobre actividades de la vida diaria (posicionamiento en la silla de ruedas, higiene perineal, cambios en la fisioterapia).

Análisis de severidad de DC mediante estudio radiológico (IR, ángulo cervicodiafisario, ángulo acetabular), pre, al año post-cirugía y al final del seguimiento. Se recoge la necesidad de cirugía ósea por fracaso en la cirugía profiláctica.

Resultados

19 pacientes (32 caderas) intervenidos mediante cirugía de partes blandas (tenotomía intrapélvica de psoas (32), tenotomía proximal del recto anterior (18) y tenotomía percutánea de aductores (32). GMFCS III (4), IV (8), V (7).

Tiempo medio de seguimiento 4,8 ±1 año. Media de edad a la cirugía 7,4 años y 14,6 años al final del seguimiento.

La media de IR pre fue de 38,56% cambiando a 5,6% al final del seguimiento. El IA pre de 21,7° pasó a 18,5° al final del seguimiento. El ángulo cérvico-diafisario prácticamente no varió pasando de 155,4° prequirúrgico a 153,8° al final del seguimiento.

En dos pacientes con displasia acetabular e IR elevado (50%-60%) se realizó cirugía ósea por progresión de la luxación a los dos años de la primera cirugía.

Las actividades de la vida diaria mejoraron en 13 pacientes.

Conclusiones

La cirugía de partes blandas consigue mantener las caderas reducidas en pacientes con IR < 40% a medio plazo. En pacientes con IR 50-60% es más impredecible el resultado siendo en estos pacientes más frecuente la necesidad de cirugía reconstructiva de cadera.

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Abstract 12.

Osteotomía de cuello astrágalo para la corrección de pie equino varo aducto rígido. Presentación de la técnica y resultados de una cohorte de 7 pacientes

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Presentado en XIII Congreso Anual Sociedad Española de Ortopedia Pediátrica SEOP-Madrid, 5-7 de junio 2019, Madrid, España.

Abstract

Introducción

La rigidez de una deformidad en equino varo aducto plantea en ocasiones la necesidad de realizar talectomías o artrodesis modelantes. Su presencia en edades prepuberales y el concepto de talectomía como cirugía de rescate, hace que otras opciones puedan considerarse. La deformidad en aducto de la cabeza del astrágalo ha sido descrita como uno de los componentes del pie zambo y detectada en nuestros pacientes. Utilizamos el concepto de acetabulum pedis para comparar la desviación a medial de la cabeza del astrágalo con la epifisis de cabeza femoral. En base a ello, diseñamos la osteotomía de resección trapezoidal del cuello del astrágalo de base externa, para corregir deformidad del retropié.

Objetivos

Describir la técnica realizada en el astrágalo así como la de los gestos asociados.

Describir los resultados radiológicos y clínicos en nuestra cohorte de pacientes.

Exponer las complicaciones asociadas, haciendo especial énfasis en la necrosis avascular de la cabeza del astrágalo.

Material y método

Se presenta una cohorte de 7 pacientes (2 niños y 5 niñas) con una media de edad de 8 años (5 - 13). La etiología neurológica en 6 casos y la sindrómica en uno de ellos, justificaban la irreductibilidad de la deformidad. La síntesis de la osteotomía fue realizada con agujas Kirschner en 3 casos y con grapas de memoria en 4. Además de la osteotomía, se persiguió la reducción de la articulación

talonavicular y el re-equilibrio muscular. El seguimiento medio fue de 14 meses (5-24). Se valoró la presencia de necrosis en la cabeza del astrágalo, la relación anatómica de la articulación talonavicular y flexibilidad del pie así como la tolerancia a la ortesis.

Resultados

En 3 de los 7 pies se observaron irregularidades en la superficie de la cabeza del astrágalo que no condicionaron ni la movilidad ni la tolerancia a la ortesis. Dichas alteraciones remodelaron posteriormente. Se objetivó la presencia de

pérdida de congruencia talonavicular que, sin embargo, se volvió reductible a la manipulación, lo que permitió la tolerancia a la ortesis y justificó el alto grado de satisfacción de los padres.

Conclusiones

La técnica descrita es segura y eficaz en la consecución de la adaptabilidad a la ortesis.

La relación talonavicular en el plano anteroposterior obtenida es compatible con un buen resultado clínico.

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Abstract 13.

Resultados a largo plazo de la cirugía multinivel con correlación de flexo fijo de rodilla en parálisis cerebral infantil nivel GMFCS IV: evaluación mediante cuestionario adaptado a situación funcional

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Presentado en XIII Congreso Anual Sociedad Española de Ortopedia Pediátrica SEOP-Madrid, 5-7 de junio 2019, Madrid, España.

Introducción

La cirugía multinivel se emplea en pacientes deambulantes que padecen parálisis cerebral infantil. Su aplicación en no deambulantes, donde la situación de caderas y columna merece una mayor atención, no está justificada de manera unánime. El impacto que supone la bipedestación asistida tanto para el paciente como para sus cuidadores, puede explicar la conveniencia del tratamiento estudiado.

Objetivos

Demostrar la mejoría en la facilitación de cuidados para pacientes no deambulantes (GMFCS IV) con flexo fijo de rodilla, tras cirugía de extremidades inferiores.

Justificar la indicación de ésta con meta en la bipedestación asistida.

Presentar el cuestionario de evaluación adaptado a situación funcional y su aplicabilidad como herramienta de análisis de resultados.

Material y método

Estudio de cohorte retrospectivo y revisión de fichas realizado en 16 pacientes con PCI espástica GMFCS IV, sometidos a cirugía de alineamiento de extremidades inferiores, con seguimiento mayor de 2 años. La evaluación fue realizada mediante cuestionario elaborado por los autores, de 15 ítems relacionados con el tratamiento y cuidados diarios, respondido telemáticamente por los familiares de los pacientes. El análisis fue ciego, por 2 autores.

Resultados

No hubo preponderancia de sexo. Media de edad de 12,4 años (9 a 15) y un flexo fijo de rodillas de 17° (10° a 45°). Seguimiento medio de 5 años y 8 meses (rango 2a 3m a 9a 8m). La cirugía más común fue la osteotomía extensora femoral distal.

De las preguntas realizadas la mejor valorada fue la referente a la tolerancia al bipedestador, seguida de las relacionadas con las transferencias en el aseo. La peor fue la mejora del higiene de zonas íntimas.

El dolor durante la primera semana tras la cirugía fue mal tolerado en 69% de las familias.

El 88% de las familias recomendarían el tratamiento a tenor de los resultados obtenidos a largo plazo (seguimiento medio sobre los 5 años).

Conclusiones

A pesar de la persistencia del daño neurológico, la cirugía multinivel con corrección del flexo fijo de rodilla consigue resultados duraderos en la bipedestación y mejora de cuidados, de pacientes con PCI GMFCS IV.

El alto porcentaje de recomendación del tratamiento, valida el uso de esta cirugía multinivel en estos pacientes, como medio para conseguir la bipedestación asistida y mejor calidad de vida.

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Abstract 14.

Evaluation of Ceftaroline Resistance (CPT-R) in Chile Across Time and a Comparison of CLSI vs. EUCAST Breakpoints in Methicillin-Resistant *Staphylococcus aureus* (MRSA)

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Presentado en IDWeek 2019, 2-6 octubre 2019, Washington D.C., Estados Unidos.

Background

CPT-R in MRSA is associated with clonal complex (CC) 5 lineages. Chile, with wide dissemination of CC5, has high MRSA rates. In 2019, CLSI revised the breakpoints (BPs) keeping susceptible (S, minimum inhibitory concentration [MIC mg/L] ≤1), added susceptible dose-dependent (SDD, MIC 2-4), removed intermediate (MIC 2); resistant (R) is now MIC ≥8. EUCAST S is MIC ≤ 1, but the R differentiates among pneumonia (MIC > 1) and nonpneumonia (NP) isolates (MIC > 2). We evaluated CPT-R across time and agreement between agencies for broth microdilution (BMD), E-test and Disk Diffusion (DD)

Methods

Hospital- (HA; n=320, 10 centers) and community-associated (CA, n=37) clinical MRSA isolates collected between 1999-2018 were confirmed with MALDI-TOF, cefoxitin DD, and *mecA* PCR. CPT susceptibilities were evaluated by BMD, E-test and DD (5 and 30 mg) across revised and old CLSI or EUCAST BPs. We determined essential and categorical agreement (EA, CA), very major, major and minor errors (VME, ME, MiE)

Results

The MIC₅₀/MIC₉₀ of HA-MRSA with BMD was 2/2 mg/L (64% of isolates considered CPT non-susceptible) and 0.5/0.5 mg/L for CA-MRSA. MIC₅₀/MIC₉₀ was 1/1.5 with E-test. Strains collected in 1999-2008 (n=161) and 2009-2018 (n=159) both had a MIC₅₀/MIC₉₀ of 2/2. The EA of E-test with BMD was 82%; results of CA-VME-ME-MiE were 51-0-0-48% using the new CLSI BPs or 51-81-0-45% using EUCAST or old CLSI BPs. For BMD, CA-VME-ME-MiE between new CLSI and EUCAST was 95-0-0-5 with 100% CA for E-test. Under NP EUCAST BPs, R isolates increase from 5 to 21% by BMD and 0 to 8% by E-test. CA-VME-ME-MiE between new CLSI and NP EUCAST BPs for BMD is 79-0-0-21 and for E-test is 91-0-0-8. For DD vs BMD, CA-VME-ME-MiE is 55-0-1-44 with new CLSI BPs, 53-63-1-43 with old CLSI and 36-6-35-51 with EUCAST. With EUCAST DD (5ug CPT) as reference vs CLSI DD (30ug CPT), CA-VME-ME-MiE is 25-70-0-38

Conclusions

CPT nonsusceptibility is frequent in the CC5 HA-MRSA clone circulating in Chile across time. All methods had poor performance against BMD, but revision of CLSI BPs decreased error rates. E-test under called the MIC. CLSI DD (under called nonsusceptibility) and EUCAST DD (overcalled resistance) are drastically discordant. Respiratory isolates evaluated under NP BPs increased rates of resistance.

Tabla 1.

	Recipient data	Donor Data	P
Age (y)	• 51.3 ± 11.5 (23% > 60y)	• 40.9 ± 13(29% > 50 y)	P < 0.001
Gender	• 57% men	• 59% men	NS
Features	<ul style="list-style-type: none"> • 72%: decompensated cirrhosis • 12%: fulminant hepatitis • 48%: Child-Pugh C • MELD at OLT: 20 ± 8.5 points • MELD > 22: 30% 	<ul style="list-style-type: none"> • Height: 167.5 + 8.9 cm • 58%: cerebrovascular accident. • 38%: head trauma. • Mean DRI 1.4 • Ischemia time: 7.24 ± 0.09 h 	

Abstract 15.

In vitro Activity of Ceftolozane/Tazobactam (C/T) Against *Enterobacteriaceae* and *Pseudomonas aeruginosa* Circulating in Chile

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Presentado en IDWeek 2019, 2-6 octubre 2019, Washington D.C., Estados Unidos.

Abstract

Background

The widespread dissemination of carbapenem-resistant (CR) *P. aeruginosa* and *Enterobacteriaceae* has created a major global public health crisis. C/T is a recently approved compound which consists of the combination of a novel cephalosporin (ceftolozane) and tazobactam (a β -lactamase inhibitor). C/T has shown good activity against a wide range of multidrug-resistant (MDR) Gram negatives, being particularly interesting as an alternative for MDR *P. aeruginosa*. We aimed to determine the activity of C/T against clinical strains of *Enterobacteriaceae* and *P. aeruginosa* recovered in 4 large clinical centers from Chile.

Methods

We analyzed 434 isolates of *Enterobacteriaceae* (347 *E. coli*, 66 *K. pneumoniae*, 21 *Enterobacter cloacae* complex) and 57 *P. aeruginosa* collected during 2017 from 4 tertiary care institutions in Santiago, Chile. Identification was performed as per each local clinical microbiology lab. Susceptibility testing was performed by broth microdilution using customized Sensititre plates (Trek). Carba-NP was performed to screen for carbapenemase production. Susceptibilities were analyzed as per 2019 CLSI breakpoints.

Results

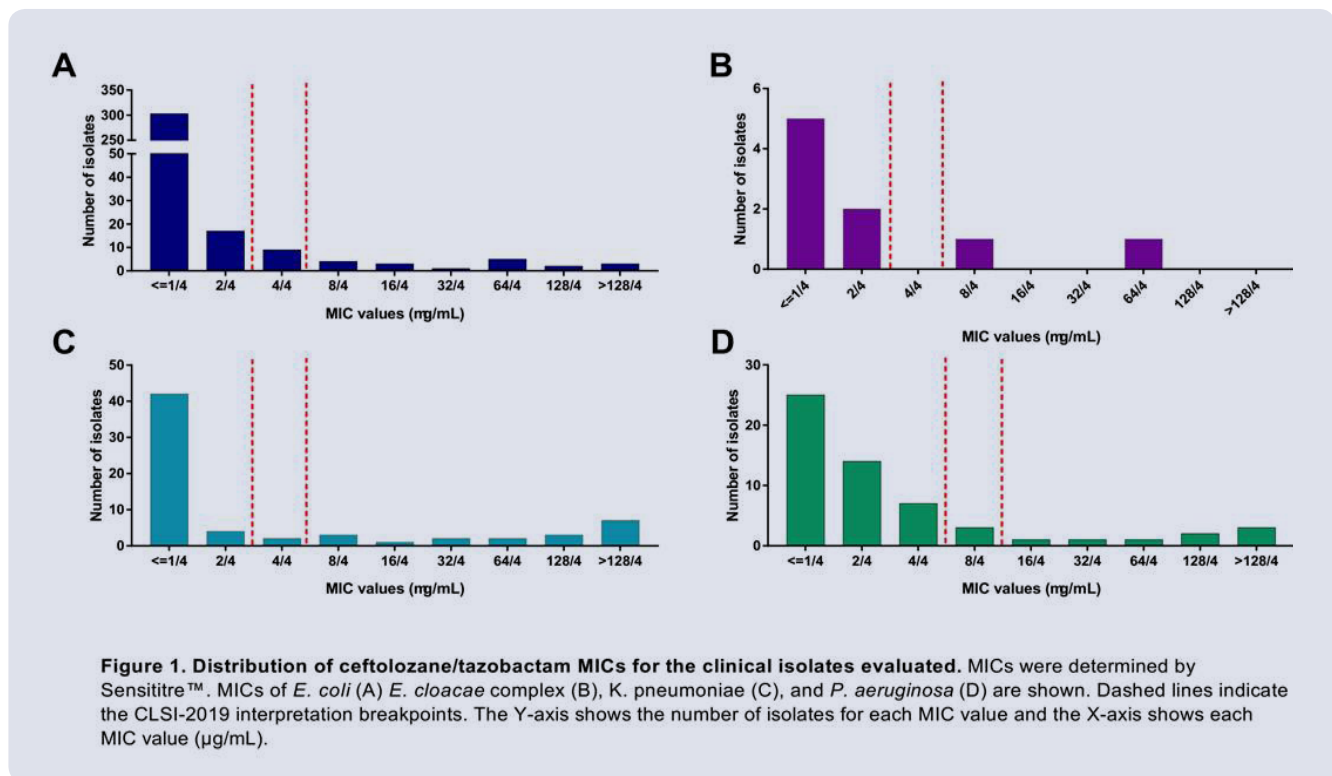
The MIC_{50/90} for C/T against *Enterobacteriaceae* and *P. aeruginosa* were 1/4 µg/mL and 2/16 µg/mL, respectively. In *Enterobacteriaceae*, susceptibility to C/T reached 92% in *E. coli* (Fig 1A), 91% in *E. cloacae* complex (Fig 1B) and 70% in *K. pneumoniae* (Fig 1C). Remarkably, C/T remained active against 58% (33/57) of CR *Enterobacteriaceae* (Fig 2A). Among Carba-NP-negative CR isolates (46%, 26/57), susceptibility to C/T was 54% (Fig 3 A-C).

In *P. aeruginosa*, the overall susceptibility to C/T was 81% (Fig 1D), maintaining activity against 69% (25/36) of CR strains

(Fig 2B). Importantly, susceptibility to C/T in CR *P. aeruginosa* isolates with a negative Carba-NP (67%, 24/36) was 83% (20/24) (Fig 3D).

Conclusions

In this multicenter study, we observed that C/T was highly active against clinical isolates of *Enterobacteriaceae* and *P. aeruginosa*. Of note, C/T remained active against a large proportion of CR clinical strains. Moreover, activity of C/T was particularly high against CR *P. aeruginosa* isolates with a negative Carba-NP.



Abstract 16.

Molecular Mechanisms Leading to Ceftolozane-Tazobactam Resistance in Clinical Isolates of *Pseudomonas aeruginosa* from Five Latin American Countries

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Presentado en IDWeek 2019, 2-6 octubre 2019, Washington D.C., Estados Unidos.

Abstract

Background

Ceftolozane-tazobactam (C/T) is a combination of an antipseudomonal cephalosporin with a known β -lactamase inhibitor, with a potent *in vitro* activity against *P. aeruginosa* (Pae), without activity against carbapenemases. Among the emerging mechanisms of C/T resistance, the most commonly described are substitutions in the Pseudomonal-derived cephalosporinase (PDC), in AmpR, and in some ESBLs. The aim of this study was to identify the molecular mechanisms responsible for the *in vitro* non-susceptibility (NS) to C/T in a group of clinical Pae strains from Latin America.

Methods

Clinical Pae isolates (n=508) were collected between Jan 2016 and Oct 2017 from 20 hospitals located in Argentina, Brazil, Chile, Colombia, and Mexico. Minimum inhibitory concentrations (MICs) to C/T were determined by standard broth microdilution and interpreted according to CLSI M100 S28 breakpoints. Production of carbapenemases in Pae isolates displaying NS to C/T was assessed by carbaNP[®] followed by PCR to detect *bla*_{KPC^I}, *bla*_{NDM-1^I}, *bla*_{VIM} and *bla*_{IMP}. Illumina whole-genome sequencing (WGS) was performed for isolates in which NS to C/T was not mediated by carbapenemases. Presence of mutations in PDC, AmpR, *oprD* and *dacB* as compared to PAO1, was evaluated.

Results

According to the CLSI breakpoints, 162/508 (32%) *Pae* isolates demonstrated NS to C/T. Due to absence of growth, only 151/162 were further processed. Table 1 summarizes the results obtained by carbaNP®, PCR and WGS performed on these isolates. In 53% of the isolates, NS to C/T was explained by the production of at least one carbapenemase, KPC or VIM. WGS revealed that in addition to substitutions in PDC and AmpR, some isolates carried mutations in *oprD* and *dacB* (encoding PBP4) genes. The molecular mechanism of resistance in 4/56 isolates is yet to be determined.

Conclusions

Carbapenemase production is the most common mechanism of resistance to C/T detected in this study. VIM and KPC were detected in equal proportions, while none of the isolates was found to carry IMP or NDM. Further studies are warranted to establish the role of the novel substitutions found in PDC and AmpR, as well as the degree to which the mutations found in *oprD* and *dacB* contribute to the NS phenotype in some isolates.

Table 1. Summary of the molecular mechanisms of resistance to C/T detected.

Country	Isolates	C/T NS (%)	CarbaNP (+) ^a	PCR (+)		WGS Genotypes		
				<i>bla</i> _{KPC}	<i>bla</i> _{VIM}	QC ^b	Other β-lactamases (n)	Other mechanisms (n)
Argentina	30	9 (30%)	2/9	0	0	7/7	<i>bla</i> _{PER-1} (1)	PDC-1 + <i>oprD</i> mut + <i>dacB</i> mut (3) PDC-1 + <i>dacB</i> mut (2) PDC-8 (1), PDC-33 (1)
Brazil	41	13 (31,7%)	8/13	1	0	4/5	None	PDC-3 + <i>oprD</i> mut + <i>dacB</i> mut (1) PDC-16 + AmpR mut (1) PDC-5 (1) ND ^c (1)
Chile	63	12 (19,45)	7/10	2	4	3/3	None	PDC-3 + <i>oprD</i> mut + <i>dacB</i> mut (1) PDC-11 (1) ND ^c (1)
Colombia	248	84 (33,9%)	55/80	30	26	22/22	<i>bla</i> _{OXA-2} (5)	PDC-1 / -3 + <i>oprD</i> mut + <i>dacB</i> mut (4) PDC-1 + <i>oprD</i> mut + <i>dacB</i> mut + AmpR mut (1) Other PDC ^d + AmpR mut (15) ND (2)
Mexico	127	44 (35,6%)	8/39	0	3	20/21	<i>bla</i> _{IMP-13} (1) <i>bla</i> _{OXA-2} (6)	PDC-3 + <i>oprD</i> mut + <i>dacB</i> mut (7) PDC-3 + AmpR mut (3) Other PDC ^d + AmpR mut (9) PDC-80 (1)

^a Two (2) strains from Chile, four (4) strains from Colombia, and five (5) strains from Mexico could not be further processed due to absence of growth. ^b Quality control of the sequences included coverage > 25. ^c ND: Not Determined. ^d Other PDCs identified include PDC-11-like, -12-like, -19-like, -24, -22-like, -37, -64, and -67. Some substitutions found are R53Q, L150I, V213A, E221G (in PDC-80), T267S, and H297Q.

Abstract 17.

Phylogenomic epidemiology of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Chilean-Cordobes clone in Latin America

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Presentado en IDWeek 2019, 2-6 octubre 2019, Washington D.C., Estados Unidos.

Abstract

Background

The MRSA Chilean-Cordobes (ChC) clone belongs to the clonal complex 5 (CC5) and typically carries SCC*mec*I. The ChC clone predominated widely throughout several countries of Latin America (LA), but during the mid-2000s a CA-MRSA CC8 LA variant (USA300-LV) quickly replaced the ChC in Colombia and Ecuador. Most notably, this replacement was not observed in Peru or Chile. Here, we aimed to understand the phylogenomic relatedness of the CC5 ChC clone obtained from different countries of LA.

Methods

We sequenced and analyzed the genomes of 115 MRSA isolates obtained between 2011-2014 from bloodstream infections in 6 LA countries (Argentina, Brazil, Colombia, Chile, Peru, and Venezuela). All isolates were confirmed as ChC clone by pulsed-field gel electrophoresis (PFGE). We used core genome-based phylogenomic reconstructions and molecular clock analysis to infer the relationships and time of divergence between clades.

Results

Whole genome-based multilocus sequence typing determined that 110/115 isolates belonged to ST5 and carried SCCmec I. The phylogenomic reconstruction showed ChC isolates clustered into 4 major clades distinctly segregated by country of origin (Fig 1). Interestingly, isolates recovered from Chile divided into 2 different clades that segregate according to the city of origin (Santiago [SCL] or Concepción [CON]), suggesting these clades evolved independently. Molecular clock analyses suggested all clades share a common ancestor with the divergence of the Chilean clades occurring earlier (Fig 2). Of note, analysis of heavy metal

genes suggested the divergence between Chilean isolates was characterized by the loss of a mercury resistance gene cluster, which is present in an 88% of CON isolates, but only in 28% of SCL (Fig 2).

Conclusions

MRSA isolates belonging to the ChC clone from 6 LA countries clustered in 4 clades according to the geographical region of isolation. This segregation suggests divergent adaptations that may respond to different selective pressures. Heavy metal resistance could play a role in the ability of the MRSA ChC to disseminate in specific geographical locations.

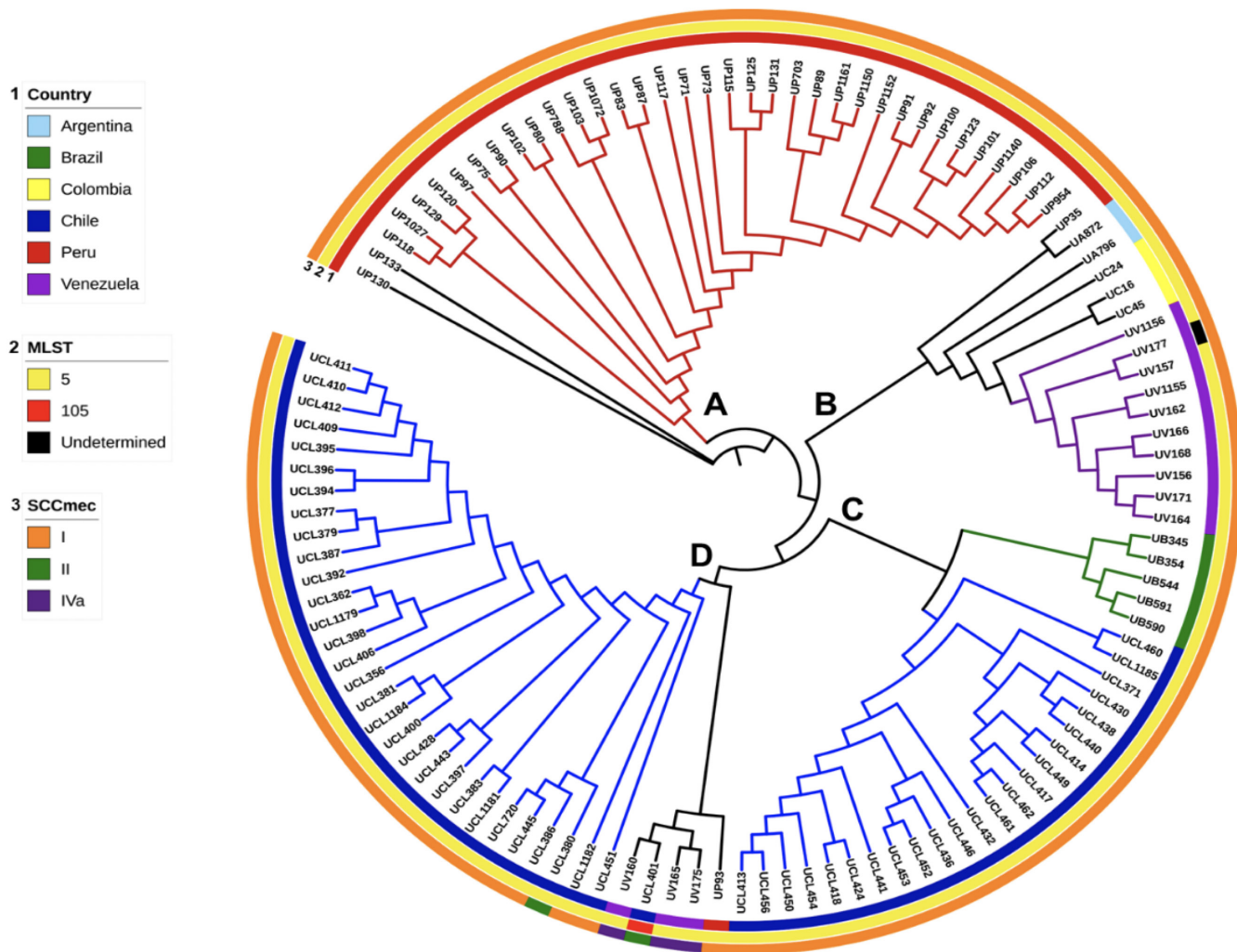
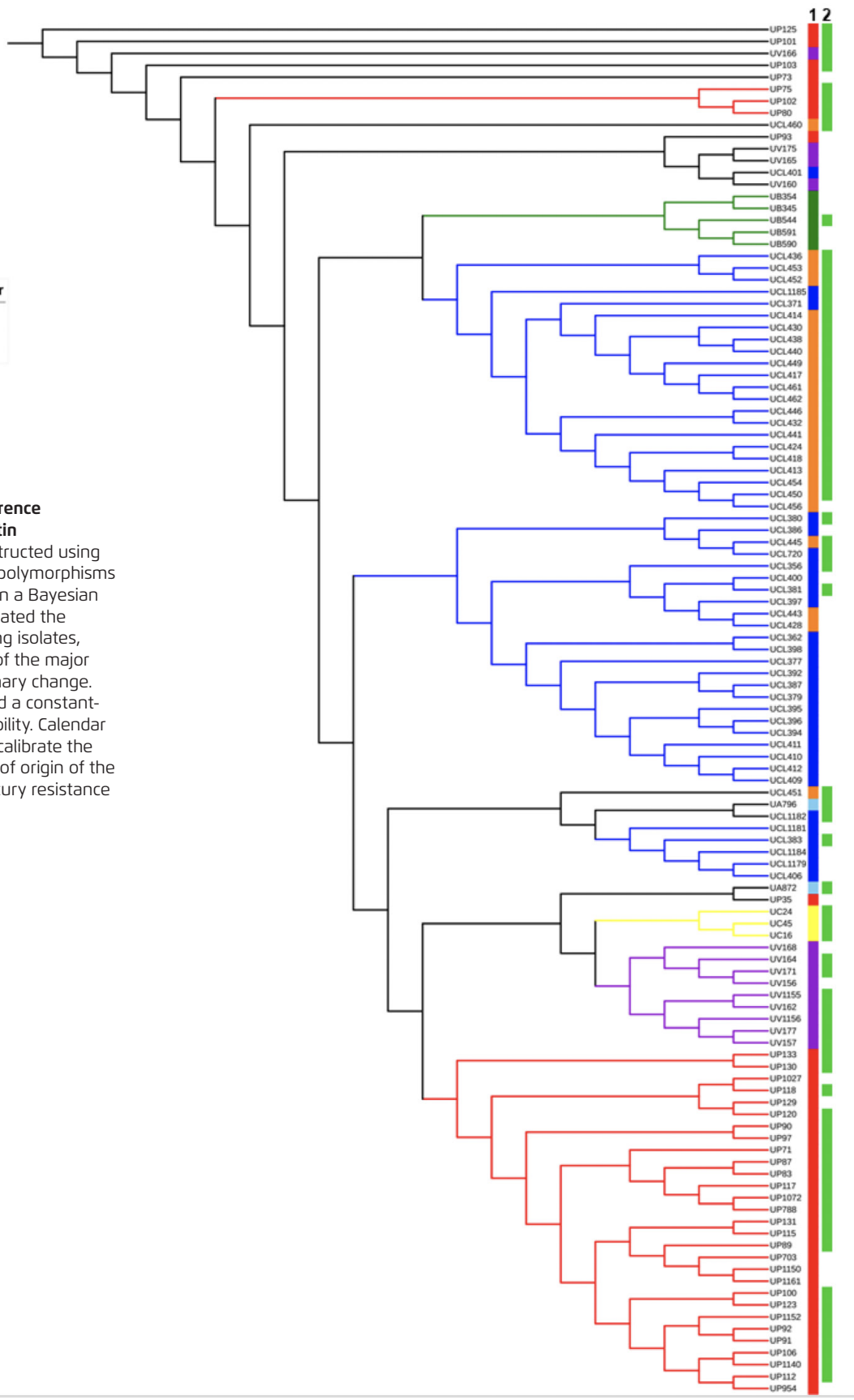


Figure 1. Core genome phylogenomic reconstruction of the 115 MRSA isolates. The four major clades are represented by A, B, C, and D. The Clade A was composed only by isolates of Peru. Clade B grouped isolates of Peru, Argentina, Colombia, and Venezuela. Clade C includes isolates of Brazil and Chile. Clade D is composed of two subclades, one with only Chilean isolates and another with five isolates of several countries and SCCmec type. Inner ring (1) shows the country of origin of the isolates; middle ring (2) shows MLST; external ring (3) shows staphylococcal chromosomal cassette mec (SCCmec) type.

- 1. Country - City**
- Argentina - Buenos Aires
 - Brazil - Sao Paulo
 - Chile - Concepcion
 - Chile - Santiago
 - Colombia - Bogota
 - Peru - Lima
 - Venezuela - Caracas

- 2. Mercury Resistance Gene Cluster**
- Presence
 - Absence

Figura 2. Evolution rates inference of Chilean-Cordobes clone in Latin America. Chronogram was constructed using core genome single-nucleotide polymorphisms from the 115 sequenced strains in a Bayesian phylogenetic analysis that estimated the phylogenetic relationships among isolates, the times since the divergence of the major clades, and the rate of evolutionary change. We used a strict-clock model and a constant-size coalescent tree prior probability. Calendar dates of isolation were used to calibrate the clock. Colored strips show 1. city of origin of the isolates and 2. presence of mercury resistance gene cluster.



Abstract 18.

The Accessory Genome in Enterococcal Bacteremia: Results from the Vancomycin-Resistant Enterococcal Bacteremia Outcomes Study (VENOUS)

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Presentado en IDWeek 2019, 2-6 octubre 2019, Washington D.C., Estados Unidos.

Abstract

Background

Vancomycin-resistant enterococci (VRE) are a major cause of nosocomial bloodstream infections. Enterococci exhibit remarkable genomic plasticity and can recombine through the acquisition of genetic material via mobile genetic elements (MGEs), including resistance genes. The accessory genome plays a major role in the evolution of enterococci within the human host. Thus, dissecting the entire genome (pan-genome) is of paramount importance to characterize the population structure of enterococci causing disease.

Methods

VENOUS is an ongoing prospective, observational study of adults with enterococcal bacteremia. From September 2016-March 2018, *E. faecalis* (*Efs*) and *E. faecium* (*Efm*) were

collected in 14 hospitals of a single hospital system and a major cancer center in Houston, TX, and a general hospital in Detroit, MI. Short- and long-read genomic sequencing were performed with Illumina MiSeq and Oxford Nanopore Technologies GridION X5, respectively. A proprietary bioinformatics pipeline was utilized for genome assembly and further analyses.

Results

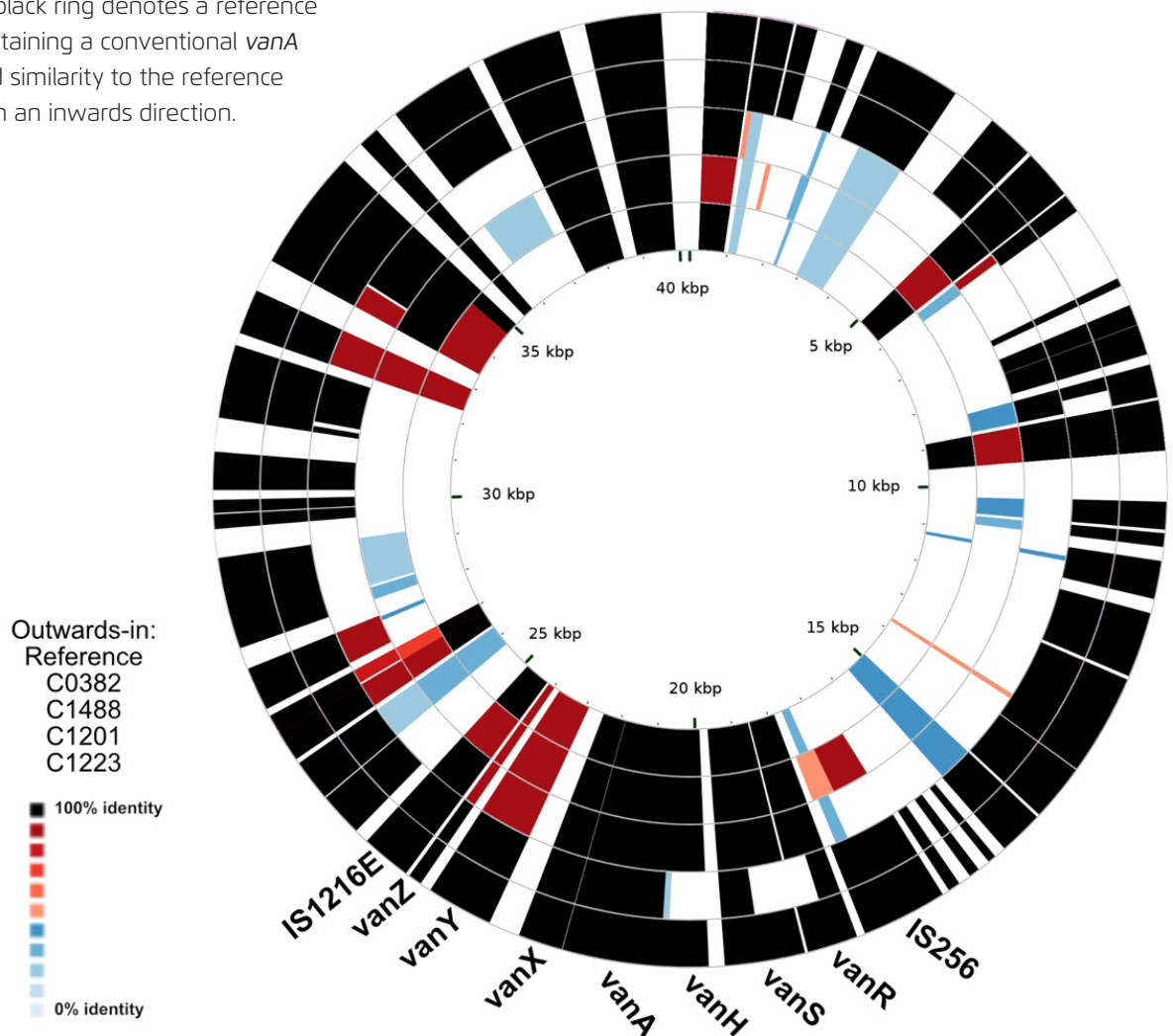
156 *Efs* and 98 *Efm* isolates from single patients were analyzed. The average proportion of core genes in each genome as 64.6% (53.0-74.1) and 49.1% (45.2-51.0) for *Efs* and *Efm*, respectively. The *vanA* gene cluster was identified in 5.1% (8/157) of *Efs* and 57.1% (56/98) of *Efm*. The plasmid-encoded *aac(6')-Ie-aph(2'')-Ia* gene conferring high-level resistance to aminoglycosides was found in 37.6% (59/157)

Efs, seven of which also possessed *vanA*. Long-read sequencing of *vanA*-harboring plasmids from a subset of VRE revealed that the *vanA* cluster was carried in plasmids ranging from 31.7 to 32.3 kb. Although the *vanA* operon was fairly conserved, insertions of MGE were commonly identified in the intergenic regions of *vanS/vanH* and *vanX/vanY*. Furthermore, a variety of MGE insertions mediated integration of the *vanA* operon, including IS1216 and IS256 (Figure).

Conclusions

Accessory genes, including AMR genes, comprise a significant proportion of the enterococcal pan-genome, indicating major genetic plasticity within these organisms. Acquired resistance genes seem to have a high degree of recombination and play a substantial role in the expansion of the genomic repertoire in clinical isolates.

Figure. Composite view of homology within the coding sequences of plasmids containing the *vanA* operon obtained through long-read sequencing. The outermost black ring denotes a reference plasmid containing a conventional *vanA* operon, and similarity to the reference decreases in an inwards direction.



Abstract 19.

Chilean axial spondyloarthritis patients report high disease burden and impaired work activity – an Internet survey in 472 patients

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Presentado en Annual European Congress of Rheumatology, EULAR 2018/ACR 2018/SpA Congress 2018, 13 al 16 de junio, Amsterdam, Holanda. *Annals of the Rheumatic Diseases* 2018;77:648.

Abstract

Background

Axial spondyloarthritis (axSpA) can be associated with significant burden and impaired work activity. In Chile, several barriers impede adequate treatment, such as insufficient access to specialists and biological treatment. Furthermore, there is an important lack of insight into the local situation. This hampers the development of adequate national treatment standards and financial support.

Objectives

1. To evaluate the disease burden, quality of life and work participation in Chilean axSpA patients.
2. To assess gender differences in disease burden and 3) compare patients with and without biologics.

Methods

Across sectional online survey among Chilean SpA patients, recruiting via the internet website and associated social media of the Chilean SpA Patient Foundation ("Espondilitis Chile"). The survey was written in Spanish and requested information, mostly via multiple choice options, on gender,

age, disease characteristics (diagnosis, disease duration, treatment), disease burden (BASDAI and BASFI), quality of life (ASAS Health Index) and work participation (WPAI). Only axSpA patients were included for further analyses. The association between BASDAI, quality of life or work participation (presenteeism, absenteeism) and subgroups (gender, biologics) was assessed through univariable regression and subsequently multivariable regression analyses, correcting for age, disease duration and concomitant treatment (NSAIDs, DMARDs, opiates).

Results

Between July and October 2018, 625 patients completed the website survey, of whom 472 reported a diagnosis with axSpA (91% radiographic axSpA, 37% male, mean age 42 years, 83% BASDAI₄, Table 1). Twenty percent used a biological and patients with biologics were more likely to have a paid job ($p=0.01$) and had significantly lower BASDAI, BASFI, ASAS HI and risk of absenteeism. In multivariable analyses, biologics remained significantly associated with a lower BASDAI.

Interestingly, biologics were used significantly more often in male patients compared to females (26% versus 16%, $p < 0.01$), while BASDAI, ASAS HI and chance of absenteeism and presenteeism were significantly higher in female patients (table 1). After correction for treatment, the gender difference in BASDAI, absenteeism and presenteeism was not significant anymore.

Conclusion

The results of the web survey demonstrate a high level of disease burden and work impairment in Chilean axSpA patients. The use of biologics is low, although its use is independently associated with having a lower disease activity. Women used significantly less biologics despite reporting a worse disease state (BASDAI, ASAS HI) and greater work disability, suggesting inequality in access to treatment.

Abstract THU0386 – Table 1. Patient characteristics of Chilean axSpA patients (n=472).

	Overall (n = 472)	Men (n = 173)	Women (n = 299)	p=	Biologics (n= 92)	No Biologics (n=372)	p=
Gender, men	173 (37)				45 (49)	124 (33)	<.01
Age, yrs	42 ±10	43 ±11	41 ±9	.02	41 ±9	41 ±10	ns
Disease duration, yrs	13 ±10	13 ±9	15 ±12	.02			
HLA-B27 positive	232 (49)	110 (77)	121 (52)	<.01	47 (57)	180 (61)	ns
Current treatment							
DMARD	261 (55)	88 (51)	173 (59)	ns	41 (46)	217 (59)	.02
NSAIDs	370 (78)	126 (73)	244 (82)	.02	59 (65)	305 (82)	<.01
BASDAI	6.1 ±2.1	5.8 ±2.3	6.3 ±2.0	.03	5.2 ±2.2	6.3 ±2.1	<.01
BASFI	5 ±3	5.1 ±2.8	5.4 ±2.4	ns	4.7 ±2.4	5.5 ±2.6	<.01
ASAS Health Index	10 ±4	9 ±4	10 ±3	<.01	9 ±3	10 ±4	ns
Currently paid job	304 (64)	69 (75)	228 (61)	.01	131 (76)	172 (58)	<.01
Absenteeism, patients	125 (41)	21 (30)	101 (44)	.04	28 (31)	66 (48)	<.01
Presenteeism, patients	202 (81)	46 (79)	151 (83)	ns	81 (75)	120 (88)	<.01

Legend: Values are reported as numbers (%) or mean (±standard deviation, SD).

Acknowledgement: This study was conducted with help of the Chilean spondyloarthritis patient foundation "Espondilitis Chile".

Disclosure of Interests: Sebastian Ibáñez Consultant for: Novartis, Paid instructor for: Bristol Myers Squibb, Speakers bureau: Abbvie, Rianne van Bentum: None declared, Omar Valenzuela Consultant for: Novartis, Paid instructor for: Bristol Myers Squibb, Speakers bureau: Abbvie, Irene van der Horst-Bruinsma Grant/research support from: MSD, Pfizer, AbbVie, Consultant for: Abbvie, UCB, MSD, Novartis, Speakers bureau: BMS, AbbVie, Pfizer, MSD

DOI: 10.1136/annrheumdis-2019-eular.849

Abstract 20.

Validation of a model predicting patient and graft survival after liver transplantation: The Donor risk index (DRI), a useful tool in Latin America.

Rodrigo Zapata, Alexandra Ginesta, Monserrat Rius, Fernando Gómez, Edgar Sanhueza, Jorge Contreras, Roberto Humeres, Guillermo Rencoret, Marcelo Vivanco, José Manuel Palacios.

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Presentado en XXV Annual Meeting of the Latin American Association for the Study of the Liver (LAASL - ALEH, for its acronym in Spanish), 20 al 23 de septiembre 2018, Punta Cana, República Dominicana.
Ganador del premio al segundo mejor trabajo del congreso.

Abstract

Background

Orthotopic liver transplantation (OLT) is the only life-saving option for patients (pt) with severe liver diseases. The progressive organ shortage and increase in the waiting list, has led to the use of marginal organs. The need of objective scores to assess the donor (D) has become necessary. The Donor Risk Index (DRI), developed in 2006 (Feng, *et al. Am J Transp*), considers 7 D characteristics (age; height, graft type, race, cause of death, cold ischemia time, organ location, donation after cardiac death), and has served as a useful metric of D quality predicting pt/graft outcomes at 3, 12 and 36 months after OLT but only validated in some North

American and European centers. There is still debate on its clinical usefulness and scarcity of data in Latin-American countries.

Aim

To assess and validate DRI as a prognostic model of survival after OLT in Chile with current MELD based liver allocation rules.

Material and methods

Adult OLT performed in Clínica Alemana between 2001-2017. Biodemographic and clinical data from D and R were analyzed from a prospectively built database. DRI calculated

for each D and correlated with R data. Statistical analysis through survival curves; comparisons between groups (T Student; $p < 0.05$).

Results

155 OLT. Overall pt survival at 3, 12 and 36 months: 94%, 91% and 85% respectively. R and D data: (Table 1). 68% D were Local (close to OLT center < 50 km); 17% Regional (51-200 km) and 14% National (> 200 km away). Local D had a shorter ischemia time (6.55 ± 0.08 h) than Regional or National D (8.09 ± 0.1 and 8.56 ± 0.09 hrs, respectively, $p < 0.0001$). Mean DRI from Local D (1.28 ± 0.24) was lower than National DRI (1.63 ± 0.27 ; $P < 0.0001$). A D with a DRI < 1.5 (given to R with mean MELD: 20.6 points)

correlated with a 3, 12 and 36 months survival of 94%, 93% and 88% respectively. A D with a DRI > 1.5 (given to R with mean MELD score: 18.5 points) correlated with a significantly lower pt survival of 90%, 86% and 77% respectively ($p=0.02$).

Conclusions

Based on this cohort experience in Latin America, an OLT with a R with a lower DRI score is correlated with a significantly better survival after OLT. This correlation is also true for R with a higher MELD score. The use of this score can be very helpful to allocate organs, considering also the R features and especially the regional distances to bring an organ without sacrificing the future allograft function.

Table 1.

	Recipient data	Donor Data	P
Age (y)	• 51.3 ± 11.5 (23% > 60 y)	• 40.9 ± 13 (29% > 50 y)	$P < 0.001$
Gender	• 57% men	• 59% men	NS
Features	<ul style="list-style-type: none"> • 72%: decompensated cirrhosis • 12%: fulminant hepatitis • 48%: Child-Pugh C • MELD at OLT: 20 ± 8.5 points • MELD > 22: 30% 	<ul style="list-style-type: none"> • Height: $167.5 + 8.9$ cm • 58%: cerebrovascular accident. • 38%: head trauma. • Mean DRI 1.4 • Ischemia time: 7.24 ± 0.09 h 	

Abstract 21.

Estudio retrospectivo del tratamiento de BK viremia o nefropatía por virus BK en Hospital Barros Luco Trudeau (HBLT)

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Presentado en XXXV Congreso Chileno de Nefrología, Hipertensión y Trasplante Renal, 17 al 20 de octubre 2018, Pucón, Chile.

Abstract

Introducción

La nefropatía por virus Bk (BKN) es una causa de disfunción y pérdida del injerto renal. Se considera la disminución de la inmunosupresión como el tratamiento. Se puede asociar ciclofovir, inmunoglobulinas endovenosas o leflunomida (otras terapias).

Objetivo

Describir nuestra población de pacientes con BKN. Evaluar la eficacia de la disminución de la inmunosupresión vs otras terapias.

Población

Adultos trasplantados en el HBLT, entre 1 agosto 2013 al 1 agosto 2017, con ≥ 1 PCR BKv positiva y seguimiento ≥ 6 meses.

Metodología

Recolección de todos los resultados positivos en el laboratorio de virología Hospital Lucio Córdova. Se recolectaron datos demográficos, epidemiológicos, biológicos, inmunosupresión, cinética de BKv, histología renal, inmunológicos y de seguimiento. Recolección en planilla EXCEL. Comparamos retrospectivamente un grupo control (G1)-disminución de inmunosupresión a un grupo de intervención (G2) "otras terapias". Los outcomes

primarios: reingreso a diálisis, rechazo agudo probado por biopsia (BPAR), negativización de BKv, muerte con injerto funcionante, ADEdn. Outcomes secundarios: función renal y proteinuria a 3,6,12 meses post BKv y tiempo para negativizar BKv. Software de análisis estadísticos Prism 6.0®.

Resultados

Cohorte de 50 pacientes, subdividiéndose en G1 (n=18) y G2 (n=32). No hubo diferencias estadísticamente significativas entre los grupos en sus características basales (tabla 1). Outcomes primarios: sin diferencias significativas. En G2, 2 BPAR (6,3%); 1(3,1%), pérdidas del injerto muerte y ADEdn; 15(46,9%) resoluciones de BKv. Outcomes secundarios:

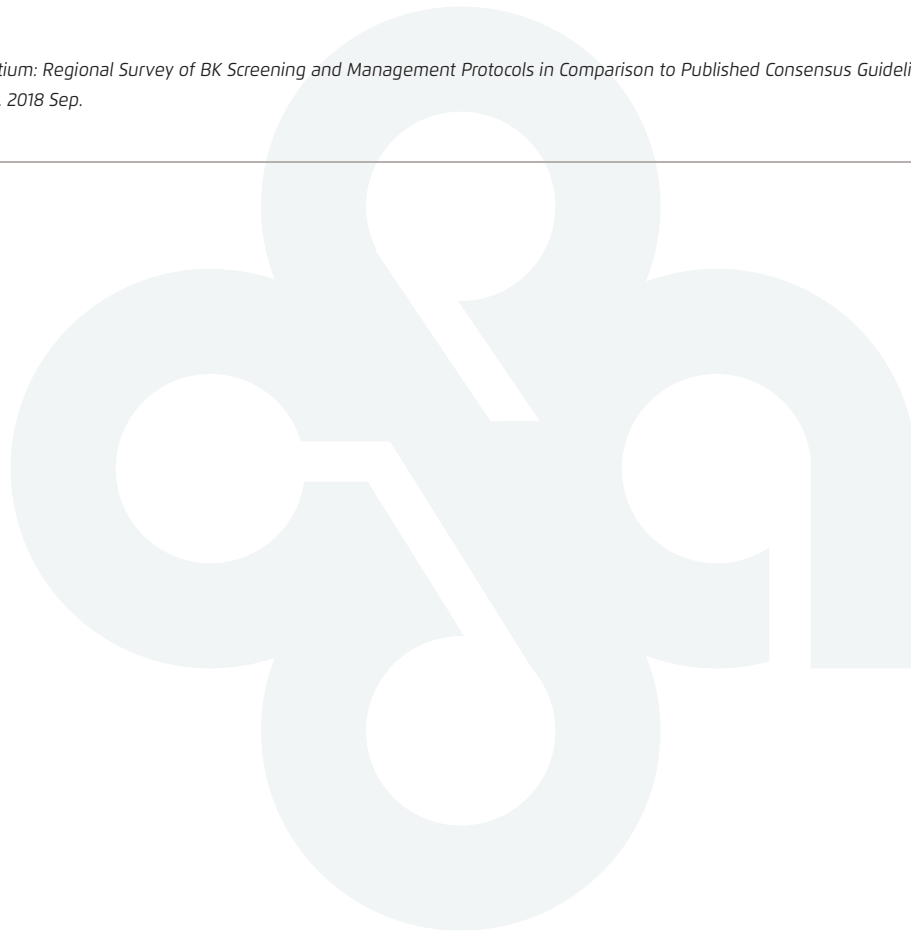
comparación intragrupo, de creatininemia y VFGe (MDRD), basal y post BKv a 3,6,12m se mantuvo estable en ambos grupos sin alcanzar diferencias significativas (fig1). La comparación intergrupos tampoco mostró diferencias significativas de dichas variables (tabla 3). En G2 el tiempo para negativizar PCR BKv fue significativamente mayor, 120 días (IQ₂₅₋₇₅ 93-155), p=0,002.

Conclusión

El tratamiento concomitante con "otras terapias" puede estar indicado en pacientes con Bkv más intensa o de alto riesgo inmunológico, en que la disminución de la inmunosupresión podría asociarse con BPAR y pérdida del injerto de causa inmunológica.

Bibliografía

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Abstract 22.

Prevalencia, severidad y patrón de afectación de hipomineralización incisivo molar en escolares de Santiago-Chile

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Presentado en XIX Congreso de la Asociación Latinoamericana de Odontopediatría. I Congreso de la Sociedad Uruguaya de Odontopediatría, 17 al 21 de octubre de 2018, Montevideo, Uruguay.

Abstract

La Hipomineralización Incisivo Molar (HIM) se define como un defecto cualitativo del esmalte, con probable origen sistémico y desencadenantes locales que afecta a primeros molares definitivos pudiendo comprometer los incisivos permanentes. Presentación clínicamente diversa, desde manchas opacas bien definidas y color variable en esmalte, hasta destrucción y gran compromiso de estructura adamantina. El objetivo de este estudio descriptivo y transversal fue establecer la prevalencia, severidad y patrón de afectación de HIM en escolares de 6 a 12 años de la provincia de Santiago. 1351 escolares fueron

seleccionados de manera aleatoria y estratificada por estrato socioeconómico. Dos investigadores calibrados (Cohen Kappa 0,94) evaluaron y diagnosticaron HIM utilizando los criterios de la Academia Europea de Odontopediatría, se usó la clasificación de Mathu-Maju y Wright para determinar severidad y el patrón de distribución se realizó aplicando clasificación de Jälevik y col. La distribución de la prevalencia, severidad y patrón de afectación fue por edad, sexo y estrato socioeconómico. Los datos fueron analizados por el programa SPSS y test de Chi-cuadrado con un intervalo de confianza del 95%.

Resultados

La prevalencia de HIM encontrada fue 12,8%, siendo más prevalentes los casos leves con un 56% y el 68% estaban involucrados sólo primeros molares permanentes (patrón tipo I). Se encontró una asociación estadísticamente significativa entre la prevalencia y el estrato socioeconómico bajo.

Conclusiones

La prevalencia de HIM en la provincia de Santiago fue de 12,8%, siendo más prevalentes los casos leves y la distribución tipo I.

Palabras clave

Hipomineralización Incisivo Molar, esmalte, epidemiología, prevalencia, defecto dentario



Abstract 23.

ASAS Consensus on Spanish Nomenclature for Spondyloarthritis

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Presentado en ACR/ARHP Annual Meeting 2018, October 19-24, Chicago, Estados Unidos.

Background/Purpose

In the last three decades, major advances in the spondyloarthritis (SpA) field have been achieved leading to new terminology. Whilst this terminology is well established in English, there is concern about the disparity of translated words and acronyms in Spanish, which is used by more than 437 million people in 21 countries. Our aim was to develop a consensus to standardize the use of Spanish terms, abbreviations and acronyms in the field of Spondyloarthritis (SpA).

Methods

An international task force comprising all ASAS Spanish-speaking native members, the executive committee of GRESSER, two methodologists, two linguists from Real Academia Nacional de la Medicina Española (RANM) and two patients from CEADE was established. A literature review was performed to identify the conflicting terms/ abbreviations/acronyms in SpA. This review examined written sources in Spanish including manuscripts, ICF and ICD, guidelines, recommendations and consensus.

A nominal group meeting and three-round Delphi was followed. The recommendations from the RANM based on the Panhispanic dictionary were followed throughout the process.

Results

Consensus was reached for 46 terms, abbreviations or acronyms related to the field of SpA. A Spanish translation was accepted for 6 terms and 6 abbreviations to name or classify the disease, and for 6 terms and 4 abbreviations related to SpA (Table 1). In addition, it was agreed not to translate into Spanish 15 acronyms because these are very well established. However, when mentioning these, it was

decided to recommend following this structure: type of acronym in Spanish and acronym and expanded form in English (Table 2). With regards to 7 terms or abbreviations attached to acronyms, it was agreed to translate only the expanded form and a translation was also selected for all of them.

Conclusion

Through this standardisation, it is expected to establish a common use of the Spanish nomenclature for SpA. The implementation of this consensus across the community will be of substantial benefit, avoiding misunderstandings and time-consuming procedures.

Table 1. Terms and abbreviations recommended by the group of experts.

#	English term (abbreviation)	Spanish term	Spanish abbreviation
1	Spondyloarthritis (SpA)	Espondiloartritis	EspA
2	Axial spondyloarthritis (axSpA)	Espondiloartritis axial	EspAax
3	Ankylosing spondylitis (AS), radiographic spondyloarthritis (r-SpA)	Espondilitis Anquilosante	EA
4	Non radiographic axial spondyloarthritis (nr-axSpA)	Espondiloartritis axial no radiografica	EspAax-nr
5	Peripheral spondyloarthritis (pSpA)	Espondiloartritis periferica	EspAp
6	Psoriatic arthritis (PsA)	Artritis psoriasica	APs
7	Inflammatory back pain (IBP)	Dolor lumbar inflamatorio	DLI
8	Magnetic resonance imaging of the sacroiliac joints (MRI-SI)	Resonancia Magnética de articulaciones sacroiliacas	RM-SI
9	Bone marrow edema (BME)	Edema de medula osea	EMO
10	Modified New York criteria (mNY)	Criterios de Nueva York modificados	NYm

Table 2. Recommended structure to name acronyms and terms related to these acronyms.

2A	Acronyms	LoA
1	Grupo ASAS (Assessment in SpondyloArthritis International Society)	100%
2A	Acronyms	LoA
1	Grupo ASAS (Assessment in SpondyloArthritis International Society)	100%
2	Indice de actividad ASDAS (Ankylosing Spondylitis Disease Activity Score)	100%
3	Indice de actividad BASDAI (Bath Ankylosing Spondylitis Disease Activity Index)	100%
4	Indice de calidad de vida ASQoL (Ankylosing Spondylitis. Quality of Life)	100%
5	Indice de calidad de vida PsAQoL (Psoriatic Arthritis Quality of Life)	100%
6	Indice ecografico MASEI (Madrid Sonographic Enthesitis Index)	100%
7	Indice de entesitis MASES (Maastricht Ankylosing Spondylitis Enthesitis)	100%
8	Indice funcional BASFI (Bath Ankylosing Spondylitis Functional Index)	100%
9	Indice global BAS-G (Bath Ankylosing Spondylitis patient Global score)	94%
10	Indice metrologico BASMI (Bath Ankylosing Spondylitis Metrology Index)	94%
11	Indice de psoriasis PASI (Psoriasis Area and Severity Index)	100%
12	Indice radiografico BASRI (Bath Ankylosing Spondylitis Radiology Index)	100%
13	Indice radiografico mSASSS (modified Stoke Ankylosing Spondylitis Spine Score)	100%
14	Indice radiografico PARS (Psoriatic Arthritis Ratingen Score)	100%
15	Indice radiografico RASSS (Radiographic AS Spinal Score)	94%
2B	Terms related to these acronyms	
1	Indice de salud ASAS-HI (Assessment in SpondyloArthritis international Society-Health Index)	94%
2	Criterio de mejoria ASAS 20 (ASAS 20 improvement criteria)	91%
3	Criterio de mejoria ASAS 40 (ASAS 40 improvement criteria)	100%
4	Criterio de mejoria ASAS 5/6 (ASAS 5/6 improvement criteria)	100%
5	Gran mejoria-ASDAS [ASDAS-MI (major improvement)]	83%
6	Mejoria clinica-ASDAS [ASDAS-CI (clinical improvement)]	72%
7	Remision parcial-ASAS (ASAS partial remission)	70%

Disclosure: V. Navarro-Compán, None; T. Oton-Sanchez, None; E. Loza, None; R. Almodóvar González, None; R. Ariza, None; W. Bautista-Molano, None; R. Burgos-Vargas, None; E. Collantes Estevez, None; E. De Miguel, None; C. M. Gonzalez, None; J. Gratacos-Masmitja, None; S. Ibáñez, None; X. Juanola, None; J. A. Maldonado-Cocco, None; A. Molto, None; J. D. Mulero, None; C. Pacheco-Tena, None; C. Ramos-Remus, None; J. Sanz, None; R. Valle-Oñate, None; P. Zarco, None; H. Marzo-Ortega, None.

To cite this abstract in AMA style:

Navarro-Compán V, Oton-Sanchez T, Loza E, Almodóvar González R, Ariza R, Bautista-Molano W, Burgos-Vargas R, Collantes Estevez E, De Miguel E, Gonzalez CM, Gratacos-Masmitja J, Ibáñez S, Juanola X, Maldonado-Cocco JA, Molto A, Mulero JD, Pacheco-Tena C, Ramos-Remus C, Sanz J, Valle-Oñate R, Zarco P, Marzo-Ortega H. ASAS Consensus on Spanish Nomenclature for Spondyloarthritis [abstract]. *Arthritis Rheumatol*. 2018; 70 (suppl 10). <https://acrabstracts.org/abstract/asas-consensus-on-spanish-nomenclature-for-spondyloarthritis/>. Accessed July 5, 2019.



Abstract 24.

IgG4-Related Disease, Clinical Series on Chilean Patients

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Presentado en ACR/ARHP Annual Meeting 2018, October 19-24, Chicago, Estados Unidos.

Abstract

Background/Purpose:

IgG4-related disease (IgG4-RD) is a chronic fibroinflammatory condition that can affect almost any organ. Gold standard for diagnosis, biopsy, can shows lymphoplasmacytic infiltration, storiform fibrosis, obliterative phlebitis and IgG4+ plasma cell infiltrate. High serum IgG4 levels is observed only in 50% of patients. Disease is more frequent in males, around 60 years old, affecting one or multiple organs with subacute development of tumors or organomegaly. Lymphadenopathies are common, and 40% of patients have a history of allergies. Umehara's diagnostic

criteria (2012), based on clinical features, serum IgG4 levels and histopathology are the most accepted. Disease was described in 2003, and Chilean reports are scarce.

We describe clinical, laboratory, histopathology findings, and treatment on Chilean IgG4-RD patients.

Methods:

We analyzed retrospectively clinical records of 48 patients with IgG4-RD from nine medical centers. Patients with possible, probable and definitive diagnosis, according to Umehara criteria, were included.

Results:

Our cohort was 56% male, with a mean age of 52 (18-76) years. Histological confirmation of IgG4-RD was obtained in 44 of 45 patients who underwent a biopsy. Twenty-three percent of patients had allergic background, 27% had eosinophilia and 43% had elevated plasma levels of IgG4 (≥ 135 mg/dl). The clinical involvement was: pleural and lung disease 38%, kidney 27%, orbital pseudotumor 25%, lymphadenopathy 21%, retroperitoneal fibrosis 19%, aortitis 19%, sialoadenitis 17%, pancreas 17%, pericardium 15% and meninges in 8%. There were three patients with hypophysitis and two with mediastinal fibrosis.

Multiple organ involvement (≥ 2 organs), observed in 69%, was significantly more frequently in males ($p < 0.05$). There was a statistically significant association between renal disease and low complement levels ($p < 0.01$). All patients who had renal or pulmonary disease had multiple organ involvement. Multiple organ involvement was not related with immunosuppressive treatment requirement.

Pathology confirmation, in 44 patients, showed: lymphoplasmacytic infiltrate in 43 (98%), storiform fibrosis in 29 (66%) and none had obliterative phlebitis. All tissues had diagnostic IgG4 (+) immunohistochemical staining. Storiform fibrosis was present in all lung and kidney biopsy, but only half of salivary gland, orbital and retroperitoneal tissue.

Regarding treatment, all patients received glucocorticoids. In 30 patients (63%) was required immunosuppressive treatment: azathioprine, followed by methotrexate and mycophenolate mofetil were drugs most used. Rituximab was used in 8 patients. Clinical response was good, but one patient dies because extensive mediastinal disease.

Conclusion:

IgG4-RD in Chilean patients is similar that described elsewhere. In most of patients serum levels of IgG4 were normal, then biopsy was essential to diagnosis. Multiple organ involvement was frequent, being pleuropulmonary, kidney, orbital and lymph node most usual localizations. Renal and pulmonary localization occurred always in context of multiorgan disease.

Disclosure: C. Cuéllar, None; O. Neira, None; A. Herrera, None; M. Gutiérrez, None; F. Elgueta, None; P. Wurmman, None; B. Mansilla, None; J. Basualdo, None; J. Vega, None; D. Erlij, None; C. Labarca, None; C. Vergara, None; V. Mezzano, None; P. Pastenes, None; L. Stange, None; S. Michalland, None; F. Silva, None; A. Jara, None; I. A. Goecke, None; C. Llanos, None; M. Badilla, None; R. Tagle, None; P. Burgos, None; M. Iruretagoyena, None; P. Sandoval, None; C. Fernández, None; C. Landeros, None.

To cite this abstract in AMA style:

Cuéllar C, Neira O, Herrera A, Gutiérrez M, Elgueta F, Wurmman P, Mansilla B, Basualdo J, Vega J, Erlij D, Labarca C, Vergara C, Mezzano V, Pastenes P, Stange L, Michalland S, Silva F, Jara A, Goecke IA, Llanos C, Badilla M, Tagle R, Burgos P, Iruretagoyena M, Sandoval P, Fernández C, Landeros C. IgG4-Related Disease, Clinical Series on Chilean Patients [abstract]. *Arthritis Rheumatol*. 2018; 70 (suppl 10). <https://acrabstracts.org/abstract/igg4-related-disease-clinicalseries-on-chilean-patients/>. Accessed July 16, 2019.

Abstract 25.

Latin Endoscopy Teleconference

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President Chilean Society of Gastroenterology. Chile.

Presentado en 12th Asian Telemedicine Symposium (ATS), 9 y 10 de noviembre 2018, Fukuoka, Japón.

Abstract**Background**

Latin America has many challenges in medical fields, with different levels of economic resources and technological infrastructure. The high incidence of Gastric Cancer in many countries with a low early diagnosis forces us to improve our endoscopic diagnostic and therapeutic skills. Telemedicine helps to share experiences and knowledge locally and around the world. Since 2013 Latin Endoscopy Teleconference Meetings (LETM) has been established and coordinated between several Latin American Institutions and TEMDEC.

Aims

Describe the evolution of LETM and evaluate satisfaction of doctors and engineers involved.

Methods

Review of reports of each Teleconference held since 2013. The evolution, running of and feedback on the LETM were evaluated and described.

Results

Since August 2013, 16 LETM have taken place. The main topic has been esophageal and gastric cancer diagnosis

or treatment (13/16). Participation of countries and institutions increased from 5/11 in 2013 to 8/59 in 2017 without considering the streaming connections. Feedback received indicated a high level of satisfaction with program contents, audiovisual transmission and ease of technical preparation with major differences in quality of connections between institutions with or without dedicated engineer teams. The time zone differences are minimal between Latin-American countries, but are huge with Japan. This, the language differences, which requires speaking in a non-native third language and technological considerations are the major challenges.

Conclusions

The LETM program, mainly focussing on Gastric Cancer issues in Latin-America is a successful initiative with increasing participation from other countries and institutions with emphasis on key-role of doctor-engineer interaction. Technical improvement and the elimination of the language barrier will most certainly enhance the functionality of such an important tool. As such, programs of remote medical education for the diagnosis of early gastric cancer will have more impact and effect.

Abstract 26.

Uso de AutoCPAP para Síndrome Apneas Hipopneas Obstructivas del Sueño en altitud geográfica

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Presentado en XVII Congreso Internacional de Medicina del Sueño-FLASS, 9 al 11 de noviembre 2018, Punta del Este, Uruguay.

Abstract

Introducción

El Síndrome Apneas Hipopneas Obstructivas del Sueño (SAHOS) es una patología altamente prevalente y la principal indicación terapéutica es el uso de CPAP. Los usuarios de CPAP frecuentemente se encuentran expuestos a condiciones de altitud geográfica en forma intermitente, ya sea por razones laborales o recreacionales. A menor presión atmosférica (mayor altitud) menor es la presión entregada por el equipo de CPAP, por lo que se requiere un ajuste, que actualmente se realiza como una compensación automática que los equipos logran sólo hasta los 2200-2500 metros sobre nivel del mar (msnm) aproximadamente.

Metodología

Se analizan los datos de titulación ambulatoria mediante AutoCPAP en 3 pacientes con diagnóstico polisomnográfico de apneas obstructivas, sin apneas centrales ni hipoventilación/hipoxemia en el estudio basal; que intercalan periódicamente condiciones de altitud geográfica significativa (2400 a 4400 msnm) con tratamiento habitual a nivel del mar. Se analizó la información entregada por el software de seguimiento del equipo de APAP con oximetría adicional integrada.

Resultados

Se estudió a 3 varones con edad promedio 46.3 años e índice masa corporal medio 26.9 Kg/m². El índice de eventos respiratorios se encontró entre 16.6 y 66.2 eventos/hora, saturación mínima 49 a 88% y CT90 0.1 a 16% (tiempo acumulado de saturación bajo 90%). Dos de los pacientes pernoctaban en altitudes intermedias (2400-2750 msnm) y uno en altitud extrema (4400 msnm). Los pacientes en altitud intermedia mantenían la misma presión utilizada a nivel de mar, mientras que en altitud extrema la presión (p95) se redujo de 1 a 3 cm H₂O. El control de los eventos respiratorios no se vió afectado por la altitud geográfica o presentó una leve alza a expensas de apneas centrales. En todos los casos se produjo un deterioro en la oximetría con niveles más bajos de saturación mínima y un marcado aumento en el CT90. En uno de los casos se registró además una prueba terapéutica con acetazolamida (250mg 6 horas antes de ir a dormir) evidenciando una mejoría progresiva en el CT90 en el transcurso de 4 días.

Conclusiones

La terapia con AutoCPAP es una alternativa factible en pacientes con SAHOS que lo necesitan en condiciones de altitud geográfica, no afectándose significativamente el control de los eventos respiratorios. Como parte de la reacción fisiológica a las condiciones de hipoxemia ambiental, se produce un deterioro de la oximetría que el AutoCPAP no es capaz de compensar. Estrategias para el manejo de esta situación son aumentar la disponibilidad de oxígeno ambiental o el uso de acetazolamida en diversos esquemas. La compensación automática a la altitud pareciera funcionar bien hasta las altitudes intermedias (que son las especificadas por los fabricantes), pero a mayor altitud se produce la caída de presión esperable, sin embargo esto no repercute en el control de los eventos. Las observaciones del presente trabajo se encuentran limitadas por lo pequeño de la muestra y a la respuesta con el equipo utilizado, no pudiendo generalizarse al uso de AutoCPAPs.



Abstract 27.

Human population genomic studies: international and local initiatives on data sharing

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Presentado en Reunión Anual Conjunta de las Sociedades de Genética, Biología, Neurociencias y Evolución 2018, Sociedad de Biología de Chile, 20 al 22 de noviembre, Puerto Varas, Chile.

Abstract

The generation of relevant benefits for population and individual health derived from the genomics revolution requires, among other needs, access to reference databases. For example, accurate clinical interpretation of whole-genome and whole-exome sequences requires comparison of the patient's linked genomic and phenotypic data with variant reference data of both healthy and affected individuals. The robustness of such comparisons is made possible by sharing genomic and associated clinical data. The recognition of the need for data access has led several countries, institutions and publishers to promote data sharing and access, with the purposes of allowing the maximum returns from the investment in research, reducing waste and promoting transparency. On the other

hand, these same countries are enacting strict general data protection laws, making it difficult to share personal data across borders. This tension has led to the concept of safe and responsible data sharing, that aims at allowing society to benefit from research, while protecting the rights and privacy of participants.

This presentation will describe international and local initiatives that promote responsible data sharing, such as the Global Alliance for Genomes and Health, METADAC, ClinVar, datoscientificos.cl, as well as the perspective of participants.

Fondecyt 1171014 (GR), 1180848 (GdF)

Abstract 28.

Prodromal manifestations of Parkinson disease in adults with 22q11.2 microdeletion syndrome

Gabriela Repetto ¹, Analía Cuiza ¹, Pedro Chaná ^{3,2}, Katuska Villanueva ⁴, Rosemarie Fritsch ⁵, Carlos Juri ⁶, Vasko Kramer ⁷, Adrian Ocampo, Claudia Ornstein, Teresa Córdova

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Presentado en Reunión Anual Conjunta 2018, Sociedad de Biología de Chile, 20 al 22 de noviembre, Puerto Varas, Chile.

Abstract

Background: Parkinson disease (PD) is the second most common neurodegenerative disorder. The classical motor symptoms are preceded by a decade by non-motor, prodromal manifestations: anosmia, autonomic dysfunction, REM-sleep behavior disorder (RBD), and loss of basal ganglia dopaminergic neurons. Chromosome 22q11.2 microdeletion syndrome (22q11DS) was recently recognized as a cause of PD.

Aim: to assess the presence of prodromal PD in adults with 22q11DS.

Methods: Instruments according to the International Parkinson and Movement Disorder (MDS) research criteria for prodromal PD; clinical, cognitive and molecular characterization of 22q11DS.

Results: We report the results on the first 20 participants: 9 males and 11 females, median age 28 years. Fifteen had the common 3Mb deletion, and 3 had the nested 1.5Mb deletion.

Full-scale IQ median was 73 (range 52-96). Four patients had psychosis and were receiving antipsychotic medication. UPDRS motor score average was 9.3 (range 1-16, normal 0); four patients had olfactory scores in the anosmia range. Home polysomnograms in 9 participants showed no signs of RBD. PET-CT showed increased, symmetric 18F-PR04-MZ pre-synaptic dopamine (DAT) signaling compared to age and gender-matched controls (130% of controls in the caudate nucleus, 115% in putamen).

Discussion: These initial results suggest the presence of prodromal findings. The observed increase in dopamine signaling on PET-CT may be related to haploinsufficiency of COMT, located within the deletion region and involved in dopamine metabolism.

Caution should be taken when interpreting these results, due to the limited sample size and the lack of validated screening tools for patients with cognitive deficits.

Funded by Fondecyt-Chile #1171014 and Fundación Puelma

Abstract 29.

Hysteroscopic metroplasty in a complete septate uterus with duplicated cervix

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Clínica Alemana de Santiago - Universidad del Desarrollo, Santiago, Chile

Presentado en el Congreso Nórdico de Cirugía Endoscópica Ginecológica, 5 al 8 de junio 2019, Helsinki, Finlandia.

This is a case of an Hysteroscopic metroplasty in a 21 year-old patient who presented with hematometra and severe dysmenorrhea. 6 months before this surgery, because of hematometra and severe pain, she had a resection of right transverse vaginal septum that blocked right hypoplastic cervix. Concomitant laparoscopy showed a normal uterine fundus, superficial endometriosis and a right tube plasty was done, because of an ipsilateral hydrosalpinx. She continued with cyclic pain and hematometra so a new intervention was planned. On physical examination vulva was normal with a normal left cervix and hypoplastic infundibular right cervix. Magnetic resonance showed two uterine cavities; the right one markedly distended, with low T2 signal and high T1 signal, compatible with hematic content, and an hypoplastic ipsilateral cervix with an obstruction at the external orifice level, while the left hemiuterus and cervix seemed normal. Also, right kidney was atrophic and there

were signs of a double proximal excretory system, and left kidney and ureter were normal.

An hysteroscopic metroplasty was planned guided by ultrasound, as showed in the video. It can be seen the complete septate uterus, which was resected first through the left uterine cavity. When the right cavity was reached during resection, a urinary catheter was placed through the left cervix, so the inflated balloon blocked water release, and the septum could be resected through the right uterine cavity. Ultrasound was particularly useful on completing the resection at the fundus, so the myometrium thickness could be precisely assessed. After the resection, the whole uterine cavity is seen, likewise both tube ostia, which seemed normal. There were no intra or post-operative complications, and the patient went home on the same day.

Abstract 30.

Interval laparoscopic cervicoisthmic cerclage

Rocío Durán-Cuiza¹, **Mariane Von Mühlenbrock**^{1,2}, **Bernardita Walker**^{1,2},
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Presentado en el Congreso Nórdico de Cirugía Endoscópica Ginecológica, 5 al 8 de junio 2019, Helsinki, Finlandia.

We present the case of a patient with cervical incompetence, with a history of two second-trimester spontaneous abortions. The first pregnancy finished in a miscarriage at 21 weeks of gestation, and on the second pregnancy, a cerclage was performed at 13 weeks because of exposed membranes, which was ripped on the 21st week without possible re-cerclage ending in an inevitable abortion at 21 weeks. Three months post abortion, without cervical conditions for a new prophylactic vaginal enclosure, an interval istmocervical laparoscopic cerclage was offered.

The surgery was performed according to the technique described by J. Scibetta (1998), under general anesthesia. A pneumoperitoneum of 20 mmHg was performed for insertion of 10 mm umbilical trocar for optic and 3 accessory ports of 5 mm. A Cohen uterine mobilizer was used.

Working pressure was set at 12 mmHg. The vesicouterine fold was identified and the bladder descent. Identification of both uterine vessels was performed. A 5 mm Cervix Set- B Braun tape was inserted into the abdominal cavity without needles and at each end, a loop of vycril 0 was tied.

Using the suprapubic port an Endoclose device was inserted in direction to the isthmus, medial to the uterine vessels, crossing the cardinal ligament and the uterine body. The tip of the device passed through the posterior sheet of the broad ligament just above the insertion of the uterosacral ligament. The tape was pulled forward, and tied on the anterior side of the uterus, while the Cohen uterine mobilizer was replaced by a cervical dilator Hegar n° 8. The tape is finally fixed with a PDS point at the same time. Finally, the mesh was peritonized.

Abstract 31.

Bladder endometriosis nodule: De novo versus C-section scar implantation

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⁽³⁾ Departamento Obstetricia y Ginecología, Hospital Clínico Universidad de Chile, Santiago de Chile, Chile.

Presentado en el Congreso Nórdico de Cirugía Endoscópica Ginecológica, 5 al 8 de junio 2019, Helsinki, Finlandia.

We present two cases of deep bladder endometriosis. In both cases, a 3 cm bladder nodule was diagnosed by clinical and MRI criteria.

In the first case, at the laparoscopic pelvic exploration, we can see the classical view of retraction of the vesico vaginal pouch, round ligaments and inflammatory peritoneum over de bladder nodule.

The technique consists in the opening of the paravesical spaces from the healthy tissue and continue dissecting, always leaving a healthy edge from the disease.

A resection of the bladder nodule guided by cystoscopy was performed. Barbed suturing with PDS for closure in 2 two planes.

In the second case, the bladder nodule is in relation to the cesarean scar. Pelvic anatomy is quite conserved, without inflammation or retraction. The bladder nodule is only evident after dissection of the vesico-uterine pouch. In this case, the preoperative diagnosis was critical to perform a complete resection surgery planning. A laparoscopic hysterectomy and colporrhaphy were performed. Subsequently, the resection of the bladder nodule guided by cystoscopy and finally barbed suturing closure was done.

Abstract 32.

Laparoscopic pelvic anatomy and sacrocolpopexy

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Presentado en el Congreso Nórdico de Cirugía Endoscópica Ginecológica, 5 al 8 de junio 2019, Helsinki, Finlandia.

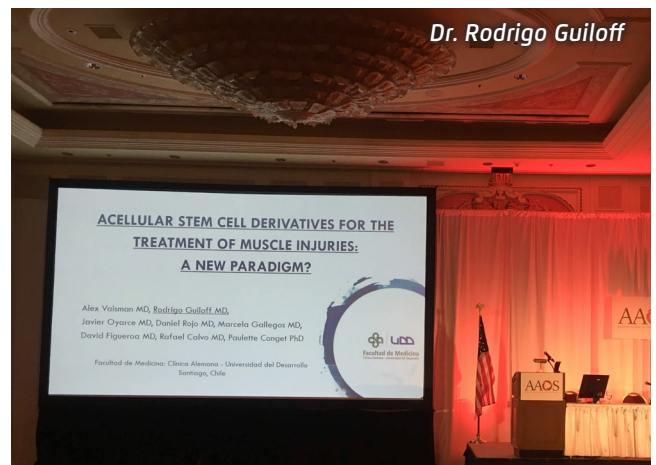
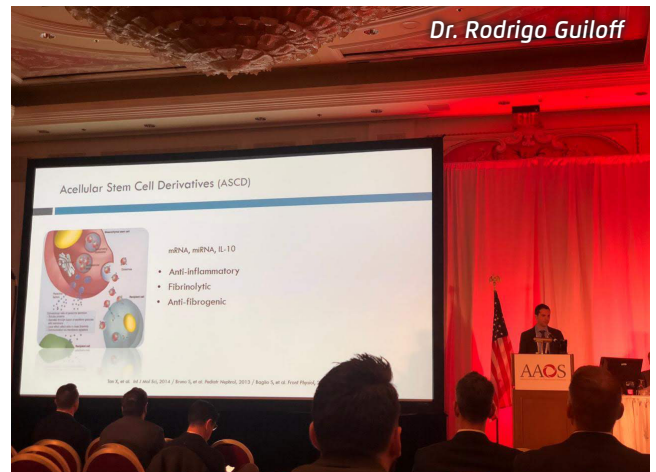
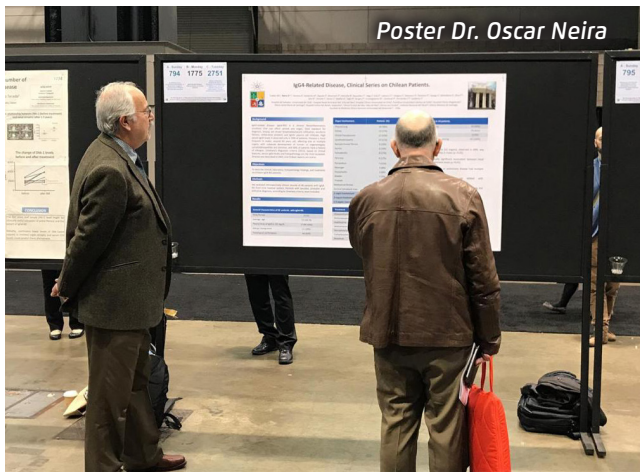
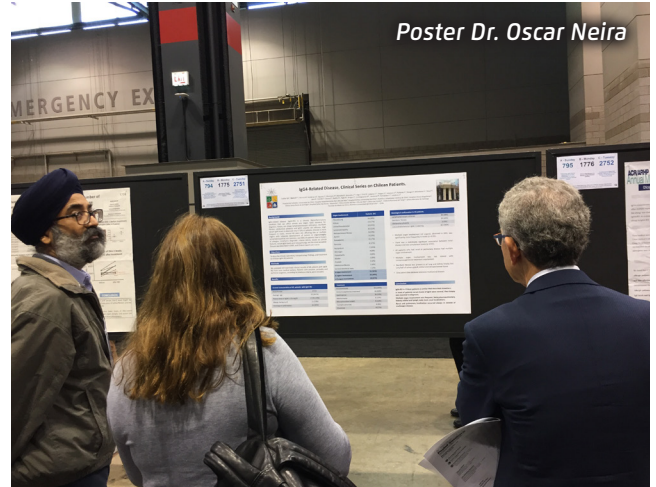
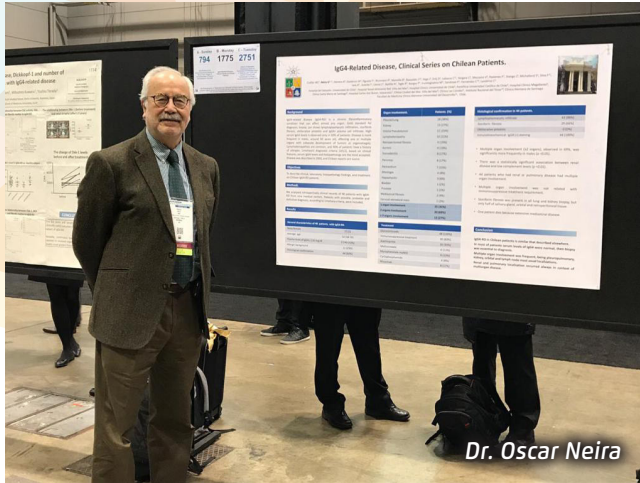
We present a case of a patient with apical prolapse in which we will perform a laparoscopic subtotal hysterectomy and sacrocolpopexy with a 6-point technique.

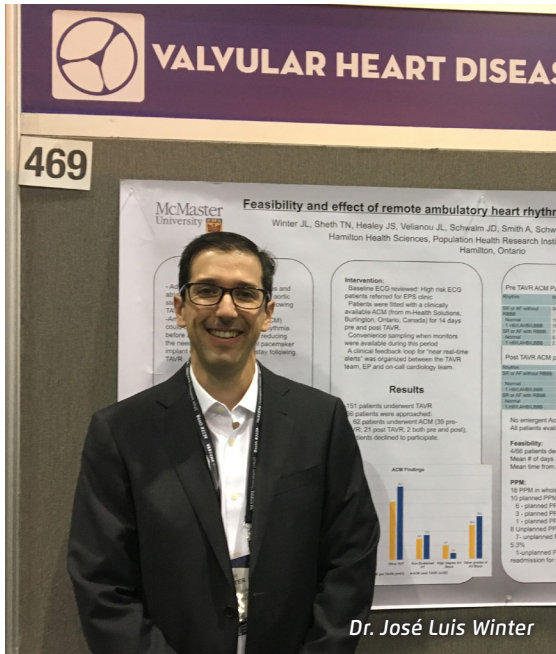
Under general anesthesia. A pneumoperitoneum of 20 mmHg was performed for insertion of 10 mm umbilical trocar for optic and 3 accessory ports of 5 mm. A uterine mobilizer SUMI® was used. Work pressure 12 mmHg. The anatomical repairs of the anterior abdominal wall and its relation to the insertion of the accessory trocars are shown. The promontory is exposed by transiently sigmoid

suspension. The presacral vessels, the bifurcation of the common iliac arteries and the crossing of the right ureter are observed. The promontory midpoint was located followed by peritoneum dissection. The rectovaginal and pararectal fossae dissection was performed until the levator ani muscle is visualized.

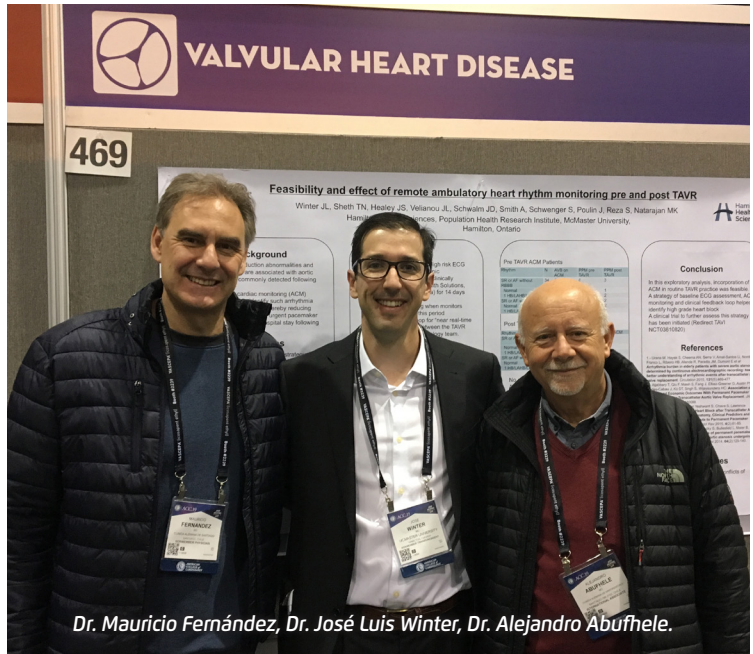
We proceed with subtotal hysterectomy. Bladder descent was performed. Cervical sutures were applied. Two polypropylene meshes were fixed to levators ani, cervix, anterior vaginal wall and done.

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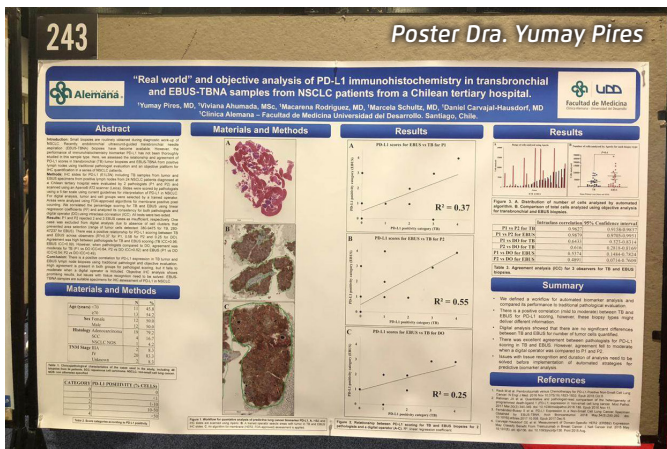
Dr. Mauricio Fernández, Dr. José Luis Winter, Dr. Alejandro Abufhele.



Dra. Yumay Pires

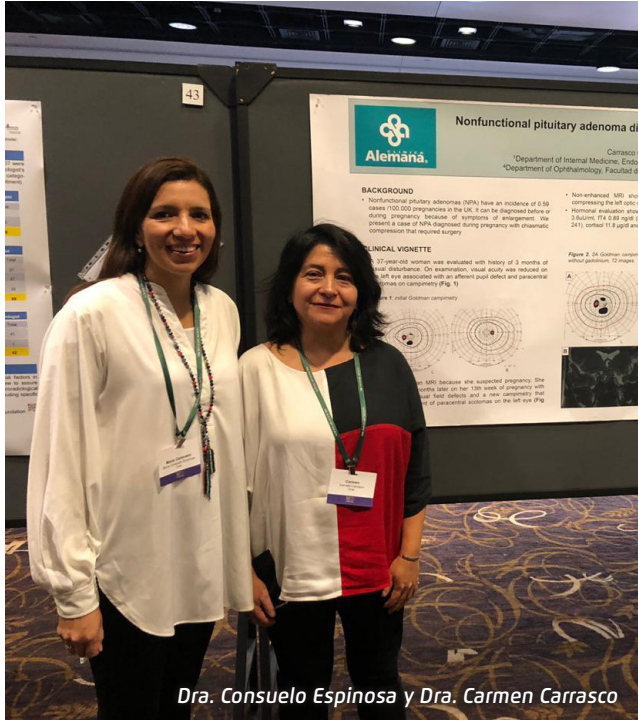


Dra. María Flavia Pizzolon

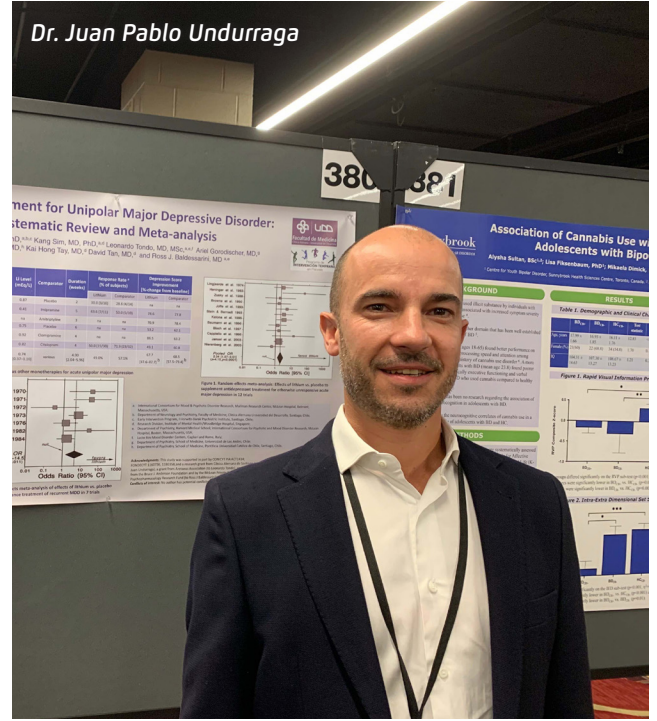


Poster Dra. Yumay Pires

Contacto Científico



Dra. Consuelo Espinosa y Dra. Carmen Carrasco



Dr. Juan Pablo Undurraga



Dr. Ignacio Miranda, premio al mejor video abstract del Congreso Nórdico de Cirugía Endoscópica Ginecológica, Finlandia.

Normas Editoriales

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I. PREPARACION DE UN ARTICULO

Los autores deben preparar manuscritos de acuerdo con los requerimientos definidos por el Comité Internacional de Editores de Revistas Biomédicas (ICMJE), que pueden ser consultados en *Ann Intern Med.* 1997;126:36-47 o www.icmje.org. Los reportes de ensayos controlados y randomizados deben cumplir con la normativa de inscripción y diseño correspondiente, que puede ser consultado en *Ann Intern Med.* 2001;134:657-662.

El manuscrito debe estar escrito en letra Times New Roman, tamaño 12, a doble espacio y debe ordenarse de la siguiente manera (1) página del título (2) resumen, (3) lista alfabética de abreviaciones usadas al menos tres veces en el cuerpo del manuscrito y en resumen, figuras y tablas, (4) texto con encabezados apropiados y conclusiones, (5) agradecimientos, (6) referencias, (7) figuras (8) leyendas de las figuras (con lista alfabética de abreviaciones), y (9) tablas (con lista alfabética de abreviaciones).

El texto del manuscrito debe ser enumerado en forma consecutiva, incluyendo el nombre del primer autor y el texto debe contenerse en un archivo procesable por Word. Las tablas pueden ser hechas con el mismo programa Word, y ubicarlas al final del manuscrito. Los esquemas, gráficos y algoritmos pueden ser hechos y enviados en Word, PowerPoint o Adobe Illustrator. Las figuras deben ser guardadas como formato jpg, gif, o tiff a un mínimo de 300 dpi y no deben insertarse en el texto del manuscrito, sino que deben guardarse como archivo separado.

Página del título

Título: Formular un título que refleje el contenido del artículo.

Autores: Incluir apellidos y nombre, grado académico, departamento e institución a la que pertenece.

Financiamiento y conflictos de interés: indicar si existió financiamiento y ayuda material para la investigación o trabajo descrito en el manuscrito (ej. número de Grant, agencia financiante, a quiénes).

Reimpresiones y correspondencia: incluir nombres, dirección, e-mail del autor a quien se dirigirán estos requerimientos.

Resumen o Abstract

Abstract de 200 palabras y un resumen en términos sencillos ("plain language summary") de 50 palabras que describa el objetivo del estudio y su resultado principal. Se debe organizar en un formato estructurado, con los siguientes encabezados: Objetivo, Pacientes y métodos, Resultados y Conclusión.

--Asegurar que la información en cada sección del resumen, está contenida en la correspondiente sección del texto.

--En la sección "Pacientes y métodos" del resumen y del texto, incluir las fechas completas que abarcó el estudio.

--Incluir el número de registro de Ensayo clínico, al final del resumen, si es el caso.

Texto

Los artículos originales deben considerar un máximo total de 2000 palabras, la introducción un máximo de 250 palabras y la discusión de 500.

No debe ser superior a 2000 palabras en el resto de los artículos.

En la introducción mencionar los antecedentes disponibles respecto del tema de estudio, establecer el objetivo de la investigación o revisión y plantear la hipótesis de trabajo.

--Abreviar un término sólo si es utilizado al menos tres veces en el texto y definirlo la primera vez que se menciona.

En la sección de pacientes (o materiales) y métodos describir las características del grupo de estudio o del caso clínico, los criterios de inclusión/exclusión, los equipos y/o fármacos utilizados, la probación del comité de ética local.

si corresponde, el consentimiento informado de los participantes y el tipo de análisis estadístico.

--Expresar medidas en Unidades convencionales, entregando el factor de conversión a Unidades del Sistema Internacional.

--Entregar valores exactos de p , incluso si no son significativos. Redondear valores de p a dos dígitos, si los primeros dos números después del decimal son ceros, entonces redondear a tres números. El menor valor de p a reportar es $p < 0.001$ y el mayor $p > 0.99$.

--Usar nombres genéricos para fármacos y equipos. Si piensa que es importante usar un nombre de producto, indique manufactura y lugar donde fue producido, entre paréntesis.

--Los símbolos genéticos aprobados, descripciones y equivalencias pueden encontrarse en www.genenames.org.

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En la sección de resultados, describir los principales hallazgos de forma lógica, con especial mención a los datos relevantes que pueden estar contenidos en tablas o gráficos. Evite duplicar la información en tablas y gráficos.

En la sección de discusión, analizar los resultados en relación a la información previamente publicada y sus limitaciones, destacando los aspectos importantes del estudio que puedan concluirse en atención al diseño del estudio.

De acuerdo a la modalidad del manuscrito, el texto debe contener diferentes secciones:

--En los trabajos originales, debe incluir las secciones de: Introducción, Pacientes y métodos, Resultados y Discusión.

--En los casos clínicos, debe incluir las secciones de: Introducción, Descripción del caso y Discusión.

--En las revisiones, debe incluir las secciones de: Introducción y Desarrollo del tema.

Agradecimientos

El autor debe asegurar que se ha obtenido permiso de quienes se agradecerá.

Referencias

Los autores son responsables de la certeza de sus referencias y de su completa cita en el texto. No incluir más de 35 referencias, priorizando aquellas más relevantes. La cita de referencias, en el texto, figuras y tablas deben ser consecutivas como aparecen en el manuscrito, utilizando número superíndice.

En la lista de referencias, incluir apellidos e iniciales del nombre de todos los autores (si son más de 6, enumerar tres y agregar "et al"), el título, fuente (las abreviaciones de revistas están contenidas en el index medicus), año, volumen, número y rango de páginas.

--Para el estilo apropiado de referencias, consultar: American Medical Association Manual of Style: A Guide for Authors and Editors, 10th ed. New York, NY; Oxford University Press; 2007:39-79.

--Ejemplos.

Revistas (Impresas)

1. Rainier S, Thomas D, Tokarz D, et al. Myofibrillogenesis regulator 1 gene mutations cause paroxysmal dystonic choreoathetosis. *Arch Neurol*. 2004;61(7):1025-1029.

Revistas (Online)

2. Duchin JS. Can preparedness for biologic terrorism save us from pertussis? *Arch Pediatr Adolesc Med*. 2004;158(2):106-107. Available at <http://archpedi.ama-assn.org/cgi/content/full/158/2/106>. Accessed June 1, 2004.

3. Kitajima TS, Kawashima SA, Watanabe Y. The conserved kinetochore protein shugoshin protects centromeric cohesion during meiosis. *Nature*. 2004;427(6974):510-517. doi:10.1038/nature02312.

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4. Bithell TC. Hereditary coagulation disorders. In: Lee GR, Bithell TC, Foerster J, Athens JW, Lukens JN, eds. *Wintrobe's Clinical Hematology*. Vol 2. 9th ed. Philadelphia, PA: Lea & Febiger; 1993:1422-1472.

Libros

5. Guyton AC. *Textbook of Medical Physiology*. 8th ed. Philadelphia, PA: WB Saunders Co; 1991:255-262.

Web

6. International Society for Infectious Diseases. ProMED-mail Web site. www.promedmail.org. Accessed April 29, 2004.

En caso de citar comunicaciones personales (orales o escritas) y datos no publicados previamente, citarlos entre paréntesis en el texto e incluir fecha. No anotar en las referencias y asegurar que se ha obtenido el permiso necesario. Evitarlos, si es posible.

Tablas

Numerar las tablas en forma consecutiva, en el orden de cita en el texto. Escribir a doble espacio, cada tabla en una página separada. Designar un título para cada tabla y definir todas las abreviaciones usadas en la tabla, en una nota al pie.

- Usar letras minúsculas superíndice (a-z) para las notas al pie de la tabla.
- No enviar tablas como imágenes.

Figuras

Se deben citar todas las figuras en el texto y numerarlas en el orden de aparición. En la leyenda de la figura, realizar la descripción correspondiente, en hoja aparte. Incluir

definiciones de cualquier abreviación que aparezca en la figura, permisos y cita apropiada.

- Usar símbolos superíndice (*, #, †) para las notas al pie de la figura.
- Para microfotografías, especificar tinción y magnificación original.
- Para cualquier figura con un paciente reconocible, debe contar con el consentimiento del paciente.
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Sección	Abstract	Nº palabras	Ref.	Figuras y tablas
Alerta	250 palabras	2000	35	Máximo 3
Buenas Prácticas Clínicas	250 palabras	2000	35	Máximo 3
Casos Clínicos	250 palabras	2000	35	Máximo 3
Campañas	250 palabras	2000	35	Máximo 3
Controversias	250 palabras	2000	35	Máximo 3
Cursos y Congresos	250 palabras	2000	35	Máximo 3
Editorial	-----			
Ética Médica	250 palabras	2000	35	Máximo 3
Estado del Arte	250 palabras	2000	35	Máximo 3
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Guías y Protocolos	250 palabras	2000	35	Máximo 3
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Links - Videos	250 palabras	2000	35	Máximo 3
Medicina Traslacional	250 palabras	2000	35	Máximo 3
Noticias	250 palabras	2000	35	Máximo 3
Perlas	250 palabras	2000	35	Máximo 3
Publicaciones CAS-UDD Estructurado	250 palabras	2000	35	Máximo 3
Quiz	-----	200		
Tips para publicar	250 palabras	2000	35	Máximo 3
Temas	250 palabras	2000	35	Máximo 3
Trabajos originales	200 + 50 plain language summary	2750	50	Máximo 3

III. Revision y Aceptación

Envío de revisiones

Reenvíe su artículo seguido con "R1" en caso de ser primera revisión o "R2" en caso de segundo análisis. Adjunte un breve comentario respondiendo a los alcances presentados por los revisores, una copia del texto con control de cambios y una copia con formato definitivo.

Recibirá un e-mail confirmando la recepción de los archivos corregidos.

Aceptación

Si su artículo es aceptado para publicación, éste debe ser editado en base a las normas dictadas en American Medical

Association Manual of Style: A Guide for Authors and Editors, 10th ed. New York, NY; Oxford University Press; 2007:39-79).

El autor principal recibirá una copia diagramada en formato pdf para su visto bueno previo a publicación.

IV. Monografías

El último número de cada volumen estará destinado a un tema monográfico que incluirá Editorial, Introducción y al menos 6 artículos originales o de referencia, más un capítulo de conclusiones.

V. Conflictos de Interés

Potenciales conflictos de interés de los autores deben ser explícitos en el documento enviado para publicación.

