INFECTOLOGÍA

➢ Transfusión de plasma convaleciente de pacientes con COVID -19

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REVISTA: Rev Peru Med Exp Salud Publica Octubre-diciembre de 2020; 37 (4): 746-754. doi: 10.17843 / rpmesp.2020.374.5767. Epub 2021 3 de febrero.

ABSTRACTO: Actualmente no hay ninguna vacuna disponible ni ningún medicamento específico contra la enfermedad del Coronavirus 2019 (COVID-19). Eltratamiento se basa principalmente en medidas de apoyo. En este contexto, se han aprobado varias terapias potencialmente útiles para su uso en ensayos clínicos, como la transfusión de plasma convaleciente (CPT). Se buscó en PubMed estudios sobre plasma de convalecencia y COVID-19, SARS o MERS. Los estudios de eficaciaclínica en enfermedades causadas por otros coronavirus (SARS-CoV y MERS-CoV) mostraron mejoría clínica, aumento de anticuerpos neutralizantes, disminución dela mortalidad y ausencia de eventos adversos durante y después del tratamiento. Encontramos 13 estudios sobre este tipo de tratamiento utilizado enpacientes con COVID-19 grave y crítico. A pesar de las limitaciones en cuanto a metodología, número de pacientes y protocolos para el análisis de donantes.

➢ Subretinal abscess due to Candida tropicalis in a patient with acute myeloid leukaemia: case report

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REVISTA: Case Reports Arch Soc Esp Oftalmol 2021 Feb 21;S0365-6691(21)00027-7. doi: 10.1016/j.oftal.2020.12.015.

ABSTRACTO: A 54-year-old female patient with a history of acute myeloid leukaemia and receivingmaintenance chemotherapy had a systemic relapse. She also had candidaemia caused by Candidatropicalis. Her blood cultures were negative after receiving antifungal treatment. Later, she had an ophthalmological assessment as part of the protocol, without ocular discomfort. In the fundoscopicexamination, a whitish chorioretinal lesion was found in the left eye in relation to subretinal abscess, which correlated with retinal angiography and optical coherence tomography. The patient was treated with systemic antifungals with a favourable resolution of the lesion.

➢ Tratamiento de la leucemia aguda durante la pandemia de COVID-19 en un entorno con recursos limitados: una experiencia multicéntrica en cuatro países de América Latina

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Pérez-Zúñiga, Estefanía Peña-López, Rosa González-Rivera, María Fernanda García-Leyva, Mónica Tejeda-Romero, Jorge Cruz-Rico, Carolina Balderas-Delgado, Guillermo J Ruíz-Argüelles, David Gómez-Almaguer.

REVISTA: JCO Glob Oncol Abril de 2021; 7: 577-584. doi: 10.1200 / GO.20.00620.

ABSTRACTO: Propósito: La pandemia de COVID-19 es un desafío colosal para la salud mundial; noobstante, subgrupos específicos enfrentan riesgos considerablemente mayores de infección y mortalidad. Entre los pacientes con enfermedades malignas, aquellos con neoplasias hematológicas tienen un mayor riesgo de resultados desfavorables. El objetivo de este estudio fueregistrar las modificaciones del tratamiento asociadas con la pandemia de COVID-19 y sus consecuencias a corto plazo en América Latina. Métodos: estudio de cohorte, multicéntrico, prospectivo, observacional, que incluyó pacientes mayores de 14 años de 14 centros de cuatro países (México, Perú, Guatemala y Panamá) que tenían un diagnóstico confirmado de leucemia aguda y que estaban en tratamiento activo desde el primer momento. Caso COVID-19 en cada paíshasta el corte el 15 de julio de 2020. Resultados: Reclutamos a 635 pacientes. Se notificaron modificaciones del tratamiento debido a la pandemia de COVID-19 en el 40,8% de los casos. La principal razón de tales modificaciones fueron cuestiones logísticas (55,0%) y la modificación másfrecuente fue el retraso de la quimioterapia (42,0%). El 13,1% de los pacientes desarrollaron la enfermedad COVID-19, con una mortalidad del 37,7%. Se identificaron varios factores como asociados de forma independiente con la mortalidad, incluido el diagnóstico de leucemia mieloideaguda (odds ratio 2,38 [IC del 95%, 1,47 a 3,84]; p <0,001), mientras que el uso de telemedicina se identificó como un factor protector (odds cociente 0,36 [IC del 95%, 0,18 a 0,82]; p = 0,014). Conclusión: Estos resultados destacan el daño colateral del COVID-19 en pacientes oncológicos.

- **Programas de administración de antimicrobianos en unidades de cuidados intensivos para adultos en América Latina: implementación, evaluaciones e impacto en los resultados**

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REVISTA: Infectar Control Hosp Epidemiol 8 de abril de 2021; 1-10. doi: 10.1017 / ice.2021.80.

ABSTRACTO: Objetivo: Evaluar el impacto de los programas de administración de antimicrobianos (ASP) en las unidades de cuidados intensivos médico-quirúrgicos para adultos (UCI-EM) en América Latina. Diseño: prospectivo cuasiexperimental con series de tiempo continuas. Entorno: El estudio incluyó 77 MS-UCI en 9 países de América Latina. Pacientes: Se incluyeron en el estudiopacientes adultos ingresados en una UCI-EM durante al menos 24 horas. Métodos: Este estudiomulticéntrico se realizó durante 12 meses. Para evaluar los ASP, los representantes de todas las EM-UCI realizaron una encuesta de autoevaluación (escala 0-100) al principio y al final del estudio.El impacto de cada ASP se evaluó mensualmente utilizando las siguientes medidas: consumo de antimicrobianos, idoneidad de los tratamientos antimicrobianos, mortalidad bruta ymicroorganismos multirresistentes en infecciones asociadas a la asistencia sanitaria (MDRO-HAI).Utilizando las puntuaciones finales de la autoevaluación de la calidad del programa de mayordomía, las MS-UCI se estratificaron y compararon entre 3 grupos: percentil ≤25, percentil> 25 a <75 y

percentil ≥75. Resultados: En total, 77 EM-UCI de 9 países de América Latina completaron el estudio. Veinte EM-UCI alcanzaron al menos el percentil 75 al final del estudio en comparación con el mismo número que permanece dentro del percentil 25 (puntuación, 76,1 ± 7,5 frente a 28,0 ± 7,3; p <0,0001). Varios indicadores obtuvieron mejores resultados en las UCI-EM en el percentil 75 frente al percentil25: consumo de antimicrobianos (143,4 frente a 159,4 DDD por 100 días-paciente; p <0,0001),adherencia a las guías clínicas (92,5% frente al 59,3%; p <0,0001) , validación de la prescripción porparte del farmacéutico (72,0 frente a 58%; p <0,0001), mortalidad bruta (15,9% frente a 17,7%; p<0,0001) y MDRO-HAI (9,45 frente a 10,96 casos por 1000 días-paciente; p = .004). Conclusión: las UCI-EM con ASP más completos mostraron una mejora significativa en la utilización de antimicrobianos.

- **Epidemiología, aspectos clínicos, resultados y factores pronósticos asociados a la fungaemia por Trichosporon: resultados de un estudio multicéntrico internacional realizado en 23 centros médicos**

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REVISTA: J Química antimicrobiana 23 de abril de 2021; dkab085. doi: 10.1093 / jac / dkab085.

ABSTRACTO: Antecedentes: los episodios de fungemia por Trichosporon (TF) han aumentado enlos últimos años y las tasas de mortalidad siguen siendo altas a pesar de los avances en el manejo de la sepsis. Es necesario investigar nuevos conceptos sobre su curso clínico, tratamiento ymicrobiología para el mejor manejo de esta infección. Objetivos: Describir la etiología, historia natural, manejo clínico y factores pronósticos del FT. Métodos: Los episodios de FT documentadosentre 2005 y 2018 en 23 centros sudamericanos se investigaron retrospectivamente utilizando un formulario clínico estándar. También se realizaron identificación molecular, pruebas desusceptibilidad antifúngica y producción de biopelículas. Resultados: Se estudiaron 88 episodiosde FT. Los pacientes presentaban diversas patologías subyacentes, entre ellas enfermedadeshematológicas (47,7%), estado postoperatorio (34%), trasplantes de órganos sólidos (n = 7, 7,9%),entre otras. Setenta y tres (82,9%) pacientes tenían un catéter venoso central (CVC) en el momento del diagnóstico de TF. La tasa de mortalidad a los 30 días fue del 51,1%. Se administró terapia abase de voriconazol a 34 pacientes (38,6%), con una tasa de mortalidad a los 30 días del 38,2%. Los predictores multivariados de mortalidad a 30 días fueron la edad (OR 1,036), la ventilación mecánica (OR 8,25) y la neutropenia persistente (OR 9,299). La eliminación del CVC se asoció con unadisminución de más del 75% en el riesgo de mortalidad a los 30 días (OR 0,241). Los análisismicrobiológicos revelaron que el 77,7% de las cepas se identificaron como Trichosporon asahii, yel voriconazol mostró la actividad in vitro más fuerte contra Trichosporon spp. Conclusiones: Laedad avanzada, la ventilación mecánica y la neutropenia persistente se asociaron con malpronóstico. El CVC puede desempeñar un papel en la patogenicidad del FT y su eliminación seasoció con un mejor pronóstico.

- **Randomized clinical trial to evaluate safety and efficacy of convalescent plasma use among hospitalized patients with COVID-19 (PERUCONPLASMA): a structured summary of a study protocolfor a randomized controlled trial**

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REVISTA:. Trials 2021 May 17;22(1):342. doi: 10.1186/s13063-021-05189-6.

ABSTRACTO: Objectives: The general objective of this study is to test the hypothesis that administration of convalescent plasma from donors with previous diagnosis of severe COVID-19 pneumonia is safe and associated with a decrease in all-cause in-hospital mortality among hospitalized patients with COVID-19 at 30 days in comparison with standard treatment alone. The secondary objectives are as follows: (1) to assess the efficacy of convalescent plasma to reduce the length of hospitalization, (2) to assess the efficacy of convalescent plasma to reduce the lengthof ICU stay, and (3) to assess the efficacy of convalescent plasma on reducing the requirement of invasive mechanical ventilation or ICU stay. Trial design: PERUCONPLASMA is a IIb phase open label, randomized, superiority clinical trial with 1:1 allocation taking place in real life routine clinical practice at public hospitals in Lima, Peru. Participants will be randomized to receive convalescent plasma along with local standard treatment or local standard treatment alone. After allocation, all participants will be followed for a total of 30 days or until hospital discharge, whichever occurs first. Participants: The population for the study are patients with severe disease with a confirmed laboratory test for SARS-CoV-2 infection hospitalized in tertiary-care hospitals in Lima, Peru. Subjects are eligible for the trial if they meet all of the following inclusion criteria: 1. Age 18 or older 2. Hospitalization due to COVID-19 with laboratory confirmation (either with serologic, molecular, or antigen test along with a compatible clinical presentation) 3. Severe or critical COVID-19 disease Severe illness was defined by 2 or more of the following: Respiratory rate of 22 or more Hypoxemia with oxygen saturation equal or less than 93% Abnormal blood gas analysis (PaO2 < 60 mmHg, PaCO2 > 50 mmHg, or Pa/FiO2 < 300) Critical disease was defined by either: Mechanical ventilationrequirement less than 72 h. Shock. 4. Capacity to provide informed consent (patient or patient's direct relative) 5. Availability of convalescent plasma units compatible with ABO blood type of the subject. Exclusion criteria: Subjects are not eligible for the trial if they meet any of the following criteria: 1. Contraindication for transfusion (e.g., prior anaphylaxis, congestive heart failure) 2. Hemodynamic instability (PA < 60 mmHg refractory to vasopressors) 3. Uncontrolled concomitant infections\ 4. Stupor or coma 5. Platelets < 50,000/µL or disseminated intravascular coagulation 6. Serum creatinine > 3.5 mg/dL or dialysis requirement 7. Total bilirubin > 6 mg/dL or jaundice of unknown etiology 8. Myocardial infarction or acute coronary syndrome 9. Active or recent (< 7 days)intracranial hemorrhage 10. Pregnancy Donors: The donors have to meet the following criteria: malebetween 30 and 60 years with a previous diagnosis of severe COVID-19-associated pneumonia within the last 3 months, with resolution of symptoms of at least 28 days. The rationale for includingdonors with severe disease is to maximize the probability of collecting convalescent plasma units with high titer of neutralizing antibodies, as the technology to measure this specific type of antibodies is not routinely available in Peru. Aliquots of plasma will

be stored for future quantification of neutralizing antibodies. Intervention and comparator: Convalescent plasma from donors with previous severe COVID-19 is the investigational medical product. The experimental group will receive 1 to 2 units of 200 to 250 ml of convalescent plasma along with local standard treatment. The control group will receive local standard treatment alone. The participants randomized to plasma will have evaluations at 6 h and 24 h to specifically evaluate possible post transfusion events. All the participants will be evaluated at day 3, day 7, and day 30 after enrolment.Main outcomes: Safety outcome: Incidence of serious adverse reactions related to convalescent plasma transfusion within 24 h after convalescent plasma administration. Efficacy outcomes: Mortality from any cause during hospitalization at 30 days post randomization. Length of hospitalization at 30 days post randomization or until hospital discharge. Duration of mechanical ventilation at 30 days post randomization or until hospital discharge. Length of hospitalization in anintensive care unit at 30 days post randomization or until hospital discharge. Exploratory: Oxygen requirement evolution at days 3 and 7. Score Sequential Organ Failure Assessment (SOFA) evolution at days 3 and 7. Dynamics of inflammatory marker (lymphocyte, C-reactive protein (CRP),D-dimer, lactate dehydrogenase (LDH)) evolution at days 3 and 7. Proportion of patients progressingto multi-organ failure at 30 days post randomization or until hospital discharge. Proportion of transfusion related adverse reactions at 30 days post randomization or until hospital discharge. Randomization: Randomization will be carried out within the electronic case report form (eCRF) in 1:1 ratio (receive plasma/control) in a randomization process established by blocks of size 2, 4, and 6. Allocation to the treatment arm of an individual patient will not be available to the investigators before completion of the whole randomization process. Randomization blocks will be performed with "ralloc", Stata's randomization process v.16.0. Randomization through the eCRF will be available 24 h every day. Blinding (masking): Both the participants and study staff will be aware of the allocated intervention. Blinded statistical analysis will be performed. Numbers to be randomized(sample size): The sample size was calculated using the Fleiss formula with continuity correction to detect a mortality reduction from 50 to 20% between the two treatment arms with a confidence level of 95% and a power of 80%. Based on this information, a total of 45 patients per arm would beneeded. After adjustment for a drop-out rate of 10% after enrolment, a total of 50 patients per arm (100 patients in total) will be enrolled. Trial status: Current protocol version: 5.0 dated January 04, 2021. Recruitment started on September 21, 2020, and is expected to finish by the end of March 2021. Trial registration: Peruvian Register of Clinical Trials (REPEC) ID: PER-016-20, registered on June 27, 2020. Clinicaltrials.gov ID: NCT04497324 , registered on August 4, 2020. Full protocol: Thefull protocol is attached as an additional file, accessible from the Trials website (Additional file 1). In the interest in expediting dissemination of this material, the familiar formatting has beeneliminated; this letter serves as a summary of the key elements of the full protocol.

➢ Listeria bacteremia in patients from a peruvian oncologic institute, 2005-2015

INVESTIGADORES: Luis E Cuéllar, Alfredo Chiappe, Juan Velarde, Alexis Holguín, Diana Portillo, WilliamVicente

REVISTA: Rev Peru Med Exp Salud Publica Jan-Mar 2021;38(1):108-112. doi: 10.17843/rpmesp.2021.381.5488. Epub 2021 Jun 25.

ABSTRACTO: Listeriosis infection is a severe disease, with high morbidity and mortality in the immunocompromised patient, especially with disseminated and fatal presentations in cancer patients. A descriptive study was developed to describe the clinical and epidemiologic characteristics in oncologic patients with listeriosis in the Instituto Nacional de Enfermedades Neoplásicas between the years 2005-2015. A total of 29 patients were included; 23 (79.3%) of the listeriosis cases showed up in patients with hematological neoplasia, of which 52.1% was acute lymphatic leukemia and 39.1% non-Hodgkin's lymphoma. The 72.4% of the isolated species correspond to Listeria monocytogenes. Twenty-seven (93.1%) patients met sepsis criteria and twenty-four (82.7%) had neurologic affection. Bacteremia was the most common presentation, followed by meningoencephalitis (20.6%). Global mortality was 75.8%. In conclusion in cancer patients, listeriosis implies high morbidity and mortality. Therefore, the suspicion of this entity is mandatory in onco-hematologic patients with sepsis and acute neurologic symptoms.

➢ Characteristics of COVID-19 in cancer patients: a cross-sectional study in Peru

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REVISTA: Ecancermedicalscience 2021 Jun 10;15:1246. doi: 10.3332/ecancer.2021.1246. eCollection 2021.

ABSTRACTO: Background: Cancer patients are at higher risk of infection and severity of Coronavirus Disease-19 (COVID-19). Management of patients infected by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is challenging due to the scarce scientific information and treatment guidelines. In this work, we present our Institutional experience with our first 100 patients with oncological malignancies and COVID-19. Patients and methods: We conducted a cross-sectional study of the first 100 patients hospitalised at the Instituto Nacional de Enfermedades Neoplasicas (Lima, Peru) who were positive for SARS-CoV-2 by reverse transcriptase (RT)-PCR during the period 30 March to 20 June. Clinicopathological variables of the oncological disease as well as risk factors, management and outcomes to COVID-19 were evaluated. Results: The mean age was 43.5 years old (standard deviations: ±24.8) where 57% were male patients. In total, 44%, 37% and 19% were adult patients bearing solid tumours, adults with haematologic malignancies and paediatric patients, respectively. Hypertension was the most frequent comorbidity (23%) followed by chronic lung disease (10%). COVID-19-associated symptoms included cough (65%), fever (57%) and dyspnoea (56%). Twelve percent of patients were asymptomatic. Nosocomial infections were more frequent in paediatric patients (84.2%) than in adult patients (16.0%). Patients with uncontrolled oncological disease were most frequent (72%). Anaemia was present in 67% of patients, 68% had lymphopenia, 62% had ferritin value > 500 mcg/L, 85% had elevated lactate dehydrogenase (LDH), 83% D-dimer > 500 ng/mL and 80% C-Reactive Protein > 8 mg/L. The most common complication was acute respiratory failure (42%). Overall fatality rate was 39% where the main cause of mortality was acute respiratory distress syndrome (64.1%). Conclusion: Paediatric patients had better outcomes than adult populations, and a high number of asymptomatic carriers and nosocomial infection, early diagnosis are recommended. Considering oncological treatments 30 days before COVID-19 diagnosis, our data did not reveal an increased mortality.