15ème Journée et Prix de la Recherche Clinique

Vendredi 20 mai 2022
13h30 – 18h00

Centre de l'innovation - HUG
Bât. Julliard

Programme
&
Recueil des résumés

UNIVERSITÉ DE GENÈVE
FACULTÉ DE MÉDECINE

CRC Centre de Recherche Clinique

HUG Hôpitaux Universitaires Genève

BIENVENUE

Cher(e) Collègue,

Cette année, nous sommes heureux de vous retrouver en présentiel pour cette 15ème Journée de la recherche clinique.

Notre Journée est un événement bien établi dans le programme des manifestations annuelles de nos institutions : c'est le rendez-vous du mois de mai qui reflète l'activité de recherche des HUG et de la Faculté de médecine de l'Université de Genève par l'intermédiaire des publications soumises.

Parmi les résumés que vous avez soumis, un jury, présidé par le Pr P. Lalive d'Epinay, a choisi les projets qui seront présentés oralement dont celui qui recevra le Prix de la recherche clinique 2022.

Le Prix médecine et genre et le Prix soignant.e seront également remis par leur jury respectif.

Quant aux posters, ils seront soumis à l'évaluation du public pendant la pause-café : c'est vous qui choisirez le meilleur poster et l'équipe lauréate de ce prix.

La première session de présentations sera suivie par la Conférence de la Pre Angèle Gayet-Ageron, médecin adjointe agrégée, suppléante du chef de service d'épidémiologie Clinique, HUG et responsable de l'unité d'appui méthodologique (UAM) du Centre de recherche clinique, HUG - Faculté de médecine :

« Place des femmes dans la recherche en santé: vers plus de visibilité! »

Comme chaque année, la distribution des prix et l'annonce des lauréats clôturera la journée.

Nous nous réjouissons de vous voir nombreux le 20 mai 2022!

Professeur Jérôme Pugin

Docteure Isabelle Semac

INFORMATION GENERALE

Qui participe?

Tous les chercheurs des HUG et de la Faculté de médecine ayant terminé récemment un projet de recherche clinique dont les résultats sont directement applicables aux soins ou aux patients.
51 projets de recherche provenant de services très variés ont été soumis pour cette quinzième édition.

Le jury du Prix de la Recherche Clinique:

Pr Patrice Lalive d'Epinay, Neurologie (Président)
Pr Michel Boulvain, Gynécologie-obstétrique, Université de Genève
Pre Nadia Elia, Anesthésiologie
Pr Marc Froissart, Centre de recherche clinique de Lausanne
Pre Anne Lübbeke-Wolff, chirurgie orthopédique et traumatologie de l'appareil moteur
Pre Klara Posfay-Barbe, Pédiatrie
Pr Patrick Saudan, Néphrologie
Pr Jean-Paul Vallée, Radiologie

Le jury a sélectionné les projets de recherche présentés oralement lors de cette Journée et désigné l'équipe de recherche lauréate du Prix de la recherche clinique.

Le Prix de la Recherche Clinique :

Un diplôme ainsi qu'une somme de CHF 1'000.- seront décernés aux auteurs.

Le Prix Médecine et Genre :

Ce prix vise à distinguer les projets de recherche évaluant l'influence du sexe et/ou du genre sur la santé. Il est décerné à une présentation orale par un jury composé de membres du groupe facultaire Médecine, Genre & Equité coordonné par les Dres Melissa Dominicé Dao et Angèle Gayet-Ageron et recevra la somme de 1'000.- francs.

Le Prix Soignant.e : NOUVEAU

Ce prix est décerné à une présentation orale par un jury composé de personnes internes et externes aux HUG et à la Faculté de médecine, présidé par le Pr. Sebastian Probst, et recevra la somme de 1'000.- francs. Ce prix est impulsé par le programme 4 du plan stratégique Vision 20+5 "+ de recherche et d'innovation au quotidien" en collaboration avec le CRC et la Direction médicale.

Le Prix du Meilleur Poster :

Un prix est attribué au meilleur poster assorti d'une somme de CHF 1'000.- francs, décerné par vote du public.

Pour toute information sur la Journée de la recherche clinique:
http://crc.hug-ge.ch/
corinne.chaudet@hcuge.ch, tél. 022 372 91 34

BIOGRAPHIE DE LA CONFERENCIERE

« Place des femmes dans la recherche en santé: vers plus de visibilité! »

Angèle Gayet-Ageron, Professeure Assistante, médecin adjointe agrégée et suppléante du chef de service d'épidémiologie Clinique (direction médicale des Hôpitaux universitaires de Genève) et responsable de l'unité d'appui méthodologique (UAM) du Centre de Recherche Clinique (Hôpitaux universitaires de Genève et Faculté de Médecine, Université de Genève)

Elle a suivi une double formation en médecine clinique et santé publique et épidémiologie dans les Universités Claude Bernard de Lyon & Victor Segalen de Bordeaux, complétée par un Doctorat en épidémiologie & recherche clinique à l'Université de Paris XI.

Elle travaille aux HUG depuis 2004, nommée médecin adjointe agrégée en 2015 dans le service d'épidémiologie clinique et l'UAM du Centre de Recherche Clinique puis responsable de l'UAM en 2019. Elle enseigne l'épidémiologie et la recherche clinique à la Faculté de Médecine depuis 2008.

Ses recherches portent sur la méthodologie en recherche clinique, l'épidémiologie ainsi que sur l'étude des biais de genre dans la recherche. Elle co-coordonne depuis 2020 le groupe facultaire Médecine, Genre & Equité et est à ce titre membre de la commission de l'égalité de la Faculté de Médecine.

PROGRAMME

13h30 Ouverture de la 15ème Journée de la recherche clinique
Pr. Jérôme Pugin, Vice-doyen à la recherche de la Faculté de médecine de l'Université de Genève, Président du Centre de Recherche Clinique

13h45 Présentations orales – Partie I (9 minutes de présentation, suivies de 3 minutes de discussion)
Modérateur: *Pr. Nicolas Mach, médecin adjoint agrégé, responsable de l'unité de recherche clinique en oncologie, Fondation Dr Henri Dubois-Ferrière Dinu Lipatti*

13h50	F. Chappuis:	Snakebite epidemiology in humans and domestic animals across the Terai region in Nepal: a multicluster random survey
14h02	F. Baptista Peixoto Befecadu:	Nurses' perceptions of caring attitudes and behaviours: A cross-sectional study in a geriatric hospital
14h24	N. Buetti:	Comparison of Routine Replacement With Clinically Indicated Replacement of Peripheral Intravenous Catheters
14h36	N. Madelon:	Robust T cell responses to SARS-COv-2 varaints in anti-CD20 treated patients following COVID-19 vaccination: a prospective cohort study
14h48	A. Huber:	Comment les transmissions médicales spontanées diffèrent-elles des transmissions structurées selon l'outil mnémotechnique IPASS ? (sous la direction de la Dre K. Blondon) *Meilleur Travail de Mémoire de Master 2021 de la Faculté de médecine*

15h00 Conférence :
"Place des femmes dans la recherche en santé: vers plus de visibilité!"
Pre Angèle Gayet-Ageron, médecin adjointe agrégée, suppléante du chef de service d'épidémiologie Clinique, HUG et responsable de l'unité d'appui méthodologique (UAM) du Centre de recherche clinique, HUG - Faculté de médecine

15h30 – 16h10 Visite des posters et vote du public du meilleur poster
Café et douceurs à disposition
Esplanade IMAD

16h10 Présentations orales – Partie II
Modératrice: *Pre Angèle Gayet-Ageron, médecin adjointe agrégée, suppléante du chef de service d'épidémiologie Clinique, HUG et responsable de l'unité d'appui méthodologique (UAM) du Centre de recherche clinique, HUG - Faculté de médecine*

16h15	A. Leidi:	Risk of reinfection after seroconversion to SARS-CoV-2: A population-based propensity-score matched cohort study
16h27	D. Mongin:	Neighbourhood socio-economic vulnerability and access to COVID-19 healthcare during the first two waves of the pandemic in Geneva, Switzerland: a gender perspective
16h39	M.-A. Pham:	Recruitment strategies to promote uptake of cervical cancer screening in the West Region of Cameroon
16h51	J. Siebert:	Effect of a Mobile App on Prehospital Medication Errors During Simulated Pediatric Resuscitation: A Randomized Clinical Trial
17h03	P. Voruz:	Functional connectivity underlying cognitive and psychiatric symptoms in post-COVID-19 syndrome: is anosognosia a key determinant?

17h15 Remise des Prix 2022
- Prix de la Recherche Clinique et du Meilleur Poster: Pr. Patrice Lalive d'Epinay, président du jury
- Prix Médecine et Genre**:** Pre Angèle Gayet-Ageron et Dre Angela Huttner, coordinatrice et membre du groupe Médecine, Genre & Equité
- Prix Soignant.e **:** Pr. Sebastian Probst, Haute école de santé de Genève, président du jury

17h25 Clôture de la journée : Pr. Jérôme Pugin

17h30 Cocktail

RECUEIL DES RESUMES

PRESENTATIONS ORALES

PAR
ORDRE SELON LE PROGRAMME

SNAKEBITE EPIDEMIOLOGY IN HUMANS AND DOMESTIC ANIMALS ACROSS THE TERAI REGION IN NEPAL: A MULTICLUSTER RANDOM SURVEY

Gabriel Alcoba, Sanjib Kumar Sharma*, Isabelle Bolon, Carlos Ochoa, Sara Babo Martins, Manish Subedi, Bhupendra Shah, Anup Ghimire, Etienne Gignoux, Francisco Luquero, Rafael Ruiz de Castañeda, Nicolas Ray,* ***François Chappuis*** *(*These authors contributed equally to the study)*

Service de Médecine Tropicale et Humanitaire (SMTH), HUG

Introduction: Each year, 2 million people worldwide are bitten by snakes, resulting in an estimated 81 000–138 000 deaths. WHO has added snakebite envenoming to the list of neglected tropical diseases, highlighting the need for stronger epidemiological evidence in endemic countries, such as Nepal.
Méthode: We conducted a cross-sectional survey in villages randomly geospatially selected from aerial images from across the Nepal's Terai lowlands region. We collected data between Nov 30, 2018 and May 7, 2019, and analysed snakebite incidence rates and outcomes in humans and domestic animals. Among 63,454 human participants living in 13,879 households (249villages), 166 were bitten by a snake over the previous 12 months; 48·8% were envenomed and 7·8% died.
Résultats: The annual cluster-adjusted incidence rate was 251·1 [95%CI 201·7-312·6]) snakebites and 20 deaths (22·4 [11·9-42·1]) per 100,000 people, or 26,749–37,661 yearly victims and 2386–3225 deaths. Victim's median age was 30 years (IQR 20–45) and 64% were female. Children (n=6; 46%) and females (n=10; 77%) were disproportionately affected among the 13 people who died. The incidence was higher in the Eastern region. Of 183,949 animals, owners reported 144 snakebites, with an annual incidence rate of 42-202 per 100,000 and mortality of 79-100%.
Conclusion: This study provides the first epidemiological estimates of snakebite envenoming and clinical complications in humans and domestic animals across Nepal's Terai lowlands. It was also the first to use a community-based, transdisciplinary, and One Health design. These findings call for a strengthening of preventive measures and better access to life-saving treatments.

NURSES' PERCEPTIONS OF CARING ATTITUDES AND BEHAVIOURS: A CROSS-SECTIONAL STUDY IN A GERIATRIC HOSPITAL

Filipa A. Baptista Peixoto Befecadu*, Marie-José Roulin, Laurence Séchaud*

HUG – Haute Ecole de Santé de Genève

Introduction: Nurses' attitudes and behaviours can have a major impact on patients' well-being, security and care satisfaction. Nurses' perceptions of adopting caring attitudes and behaviours in a geriatric context are under-investigated. The aim of this study was to describe nurses' perceptions regarding the importance, competency, and feasibility aspects of their caring attitudes and behaviours, and compare each investigated care domain (clinical, relational, humanistic and comforting) with nurses' perceptions of their importance, competency and feasibility.
Méthode: A crross-sectional study was conducted. Ninety nurses were recruited with a convenience sample. The Caring Nurse-Patient Interaction-23 item scale and a sociodemographic questionnaire were used to collect data from October to December 2017.
Résultats: Nurses assigned high scores with an overall mean of 4.01 ± 0.28 for all items. On all items, the scores of the scale of importance (M=4.56, SD= 0.32) were higher than the ones of perceived competency (M=3.98, SD=0.36) and perceived feasibility (M=3.47, SD=0.49).
Conclusion: Nurses valued caring and felt fairly competent. However, it was difficult for them to adopt caring attitudes and behaviours in their own practice.

COMPARISON OF ROUTINE REPLACEMENT WITH CLINICALLY INDICATED REPLACEMENT OF PERIPHERAL INTRAVENOUS CATHETERS

***Niccolò Buetti**, Mohamed Abbas, Didier Pittet, Marlieke EA de Kraker, Daniel Teixeira Marie-Noëlle Chraiti, Valérie Sauvan, Julien Sauser, Stephan Harbarth, Walter Zingg*

Service prévention et contrôle de l'infection, HUG

Introduction: We investigate the incidence of PVC-BSIs after changing the policy of routine PVC replacement every 96 hours to clinically indicated replacement.
Méthode: We performed institution-wide, observational cohort study evaluated all patients hospitalized at a large university-affiliated hospital with 10 sites in Western Switzerland with a PVC insertion between January 1, 2016, and February 29, 2020. Peripheral intravenous catheters were routinely replaced every 96 hours until March 31, 2018 (baseline period). Between April 1, 2018, and October 15, 2019, PVCs were replaced if clinically indicated (intervention period). From October 16, 2019, PVCs were again routinely replaced every 96 hours (reversion period). The PVC-BSI rates and PVC-BSI incidence rate ratios (IRRs) during each period.
Résultats: 412631 PVCs with documented catheter duration were included. Eleven PVC-BSIs were observed during the baseline period, 46 during the intervention, and 4 during the reversion period. The number of PVCs still in place more than 4 or more than 7 days was higher during the intervention period compared with the baseline and reversion periods. An increased IRR of PVC-BSIs was observed for the intervention period (IRR, 7.20; 95% CI, 3.65-14.22; P<.001) compared with baseline, whereas during the reversion period there was no significant increase (IRR, 1.35; 95% CI, 0.30-6.17; P=.69).
Conclusion: The results of this cohort study using a prospective surveillance database suggest that replacement of PVCs only when clinically indicated may be associated with an increased risk of PVC-BSI compared with routine replacement

ROBUST T CELL RESPONSES TO SARS-COV-2 VARAINTS IN ANTI-CD20 TREATED PATIENTS FOLLOWING COVID-19 VACCINATION: A PROSPECTIVE COHORT STUDY

***Natacha Madelon**, Nelli Heikkilä, Kim Lauper, Gautier Breville, Irène Sabater Royo, Rachel Goldstein, Diego O. Andrey, Alba Grifoni, Alessandro Sette, Claire-Anne Siegrist, Axel Finckh, Patrice H. Lalive, Arnaud M. Didierlaurent, Christiane S. Eberhardt*

Center for Vaccinology, Department of Pathology and Immunology, Division of General Pediatrics, Department of Woman, Child and Adolescent Medicine, Department of Neurosciences, Division of Neurology
Division of Rheumatology,Department of Medicine

Introduction: Patients treated with anti-CD20 therapy are particularly at risk of developing severe COVID-19, however little is known regarding COVID-19 vaccine repsonse against variants in this population.
Méthode: This prospective observational cohort study assesses humoral and T-cell responses after vaccination with 2 or 3 doses of mRNA-based COVID-19 vaccines in patients treated with rituximab for rheumatic diseases or ocrelizumab for multiple sclerosis (n=37), compared to immunocompetent individuals (n=22). The immune response to different SARS-Cov-2 variants was assessed.
Résultats: Spike-specific antibodies were detectable in 69.4% of patients (100% in controls) but S-specific CD4+ T cells were equally detected in patients and controls with even higher response rates for CD8+ T cells in patients. T cells were polyfunctional but expressed more activation markers in patients. S-specific T-cell memory against all variants were maintained in half of the MS patient on Ocrelizumab 6 months post dose 2. A third dose enhanced the number of responders to all variants but Omicron-specific T cell response was generally lower than the vaccine-strain.
Conclusion: Our study suggests that patients on anti-CD20 treatment can mount potent T-cell responses to mRNA COVID-19 vaccines, irrespetive of the variants, despite impaired humoral responses. This could play an important role in the reduction of complications of severe COVID-19

COMMENT LES TRANSMISSIONS MEDICALES SPONTANEES DIFFERENT-ELLES DES TRANSMISSIONS STRUCTUREES SELON L'OUTIL MNEMOTECHNIQUE IPASS ?

***Aurélie Huber**, Belinda Moyano, Katherine Blondon*

Médecine Interne Générale, HUG

Meilleur Travail de Mémoire de Master de Médecine 2021

Introduction: Les mauvaises transmissions d'informations au sujet d'un patient sont responsables de 80% des erreurs médicales évitables. Des outils mnémotechniques structurant ces communications, dont l'IPASS (I-Illness severity, P-Patient summary, A-Actions list, S-Situation awareness, S-Synthesis), ont démontré un impact positif sur le taux d'erreur. Actuellement, dans le service de médecine interne des HUG, les médecins ne suivent pas de structure particulière lors des transmissions médicales. Nous avons ainsi comparé les éléments de ces communications spontanées à ceux qui auraient été transmis en suivant la structure de l'outil IPASS (contenu et séquence).
Méthode: Analyse quantitative et qualitative secondaire d'une étude de simulation en trois étapes (1. transmission standardisée, 2. début de garde avec 4 appels infirmiers, 3. transmission secondaire à un collègue reprenant la garde). Participants : 15 internes et 15 superviseurs. Gold standard : éléments essentiels définis par un groupe d'experts.
Les données ont été codées selon un lexique prédéfini à d'aide du logiciel Atlas.ti. L'analyse s'est concentrée sur le taux de pertinence et d'exhaustivité des transmissions, ainsi que la répartition des 4 catégories de l'IPAS(S) et leur séquence.
Résultats: Les taux de pertinence et d'exhaustivité s'élèvent respectivement à 37,2% ± 0.07 et 51,9% ± 0.1, sans différence significative entre les internes et les superviseurs, et sont corrélés positivement à la durée totale de la transmission. La répartition des catégories de l'IPAS(S) est très asymétrique tant dans le GS que chez les participants avec des différences statistiquement significatives entre ces groupes pour les catégories A (p=0,046) et I (p≤0,001). L'analyse séquentielle révèle une tendance générale P-A-S-I avec une grande variabilité en fin de transmission surtout marquée entre les cas cliniques.
Conclusion: Nos résultats démontrent qu'il y a beaucoup d'informations non essentielles transmises et d'éléments essentiels omis, ce qui peut être une source d'erreur médicale. Pour garder une qualité acceptable de ces transmissions, ces moments ne doivent être ni précipités, ni rallongés excessivement. Les transmissions actuelles diffèrent de l'outil IPASS tant du point de vue du contenu qu'au niveau de la séquence. Ainsi, on peut espérer rendre les transmissions plus efficaces grâce à l'implantation de cet outil mnémotechnique qui a prouvé sa valeur dans des études précédentes.

RISK OF REINFECTION AFTER SEROCONVERSION TO SARS-COV-2: A POPULATION-BASED PROPENSITY-SCORE MATCHED COHORT STUDY

***Antonio Leidi** 1, Flora Koegler 1, Roxane Dumont 2, Richard Dubos 2, María-Eugenia Zaballa 2, Giovanni Piumatti 2 3, Matteo Coen 1, Amandine Berner 1, Pauline Darbellay Farhoumand 1, Pauline Vetter 4, Nicolas Vuilleumier 5, Laurent Kaiser 4, Delphine Courvoisier 6, Andrew S Azman 2 7, Idris Guessous 2, Silvia Stringhini 2*

1. Division of General Internal Medicine, Geneva University Hospitals, Geneva, Switzerland. 2. Division of Primary Care Medicine, Geneva University Hospitals, Geneva, Switzerland. 3. Institute of Public Health, Faculty of BioMedical Sciences, Università della Svizzera Italiana, Lugano, Switzerland.
4. Geneva Center for Emerging Viral Diseases, Geneva University Hospitals, Geneva, Switzerland. 5. Division of Laboratory Medicine, Geneva University Hospitals, Geneva, Switzerland. 6. General Directorate of Health, Geneva, Switzerland. 7. Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA.

Introduction: Serological assays detecting anti-SARS-CoV-2 antibodies are being widely deployed in studies and clinical practice. However, the duration and effectiveness of the protection conferred by the immune response remains to be assessed in population-based samples. To estimate the incidence of newly acquired SARS-CoV-2 infections in seropositive individuals as compared to seronegative controls we conducted a retrospective longitudinal matched study.
Méthode: A seroprevalence survey including a representative sample of the population was conducted in Geneva, Switzerland between April and June 2020, immediately after the first pandemic wave. Seropositive participants were matched one-to-two to seronegative controls, using a propensity-score including age, gender, immunodeficiency, BMI, smoking status and education level. Each individual was linked to a state-registry of SARS-CoV-2 infections. Our primary outcome was confirmed infections occurring from serological status assessment to the end of the second pandemic wave (January 2021).
Résultats: Among 8344 serosurvey participants, 498 seropositive individuals were selected and matched with 996 seronegative controls. After a mean follow-up of 35.6 (SD 3.2) weeks, 7 out of 498 (1.4%) seropositive subjects had a positive SARS-CoV-2 test, of whom 5 (1.0%) were classified as reinfections. In contrast, the infection rate was higher in seronegative individuals (15.5%, 154/996) during a similar follow-up period (mean 34.7 [SD 3.2] weeks), corresponding to a 94% (95%CI 86% to 98%, P<0.001) reduction in the hazard of having a positive SARS-CoV-2 test for seropositives.
Conclusion: Seroconversion after SARS-CoV-2 infection confers protection against reinfection lasting at least 8 months. These findings could help global health authorities establishing priority for vaccine allocation.

NEIGHBOURHOOD SOCIO-ECONOMIC VULNERABILITY AND ACCESS TO COVID-19 HEALTHCARE DURING THE FIRST TWO WAVES OF THE PANDEMIC IN GENEVA, SWITZERLAND: A GENDER PERSPECTIVE

***Denis Mongin**, Stéphane Cullati, Michelle Kelly-Irving, Maevane Rosselet, Simon Regard, Delphine S. Courvoisier*

Faculté de médecine, université de Genève - Service de qualité des soins, département de réadaptation et gériatriques

Introduction: Neighbourhood socio-economic inequities have been shown to affect COVID-19 incidence and mortality, as well as access to tests. This article aims to study how the link between inequities and COVID-19 outcomes varies between the first two pandemic waves and gender.
Méthode: We performed an ecological study based on the COVID-19 database of Geneva between Feb 26, 2020, and June 1, 2021. Outcomes were the number of tests per person, the incidence of COVID-19 cases, the incidence of COVID-19 deaths, the positivity rate, and the delay between symptoms and test. Outcomes were described by neighbourhood socio-economic levels and stratified by gender and epidemic waves (first wave; second wave), adjusting for proportion of inhabitants older than 65 years old.
Résultats: Low neighbourhood socio-economic levels are associated with a lower number of tests per person, a higher incidence of COVID-19 cases and of COVID-19 deaths. The association between socio-economic inequities and incidence of COVID-19 deaths was mainly present during the first wave of the pandemic, and was stronger among women. The increase in COVID-19 cases among vulnerable populations appears mainly during the second wave and originates from lower access to tests for men, and a higher number of COVID-19 cases for women.
Conclusion: The COVID-19 pandemic affected people differently depending on their socio-economic level. Because of their employment and higher prevalence of COVID-19 risk factors, people living in neighbourhoods of lower socio-economic levels, especially women, were more exposed to COVID-19 consequences.

RECRUITMENT STRATEGIES TO PROMOTE UPTAKE OF CERVICAL CANCER SCREENING IN THE WEST REGION OF CAMEROON

***Marie-Anne Pham1**, Khadidja Benkortbi1,2, Bruno Kenfack3,4, Eveline Tincho Foguem5, Jessica Sormani2,6, Ania Wisniak2,7, Sophie Lemoupa Makajio2,8, Engelbert Manga9, Pierre Vassilakos2,10 & Patrick Petignat1,2*

1Faculty of Medicine, University of Geneva, Geneva, Switzerland
2Gynecology Division, Department of Pediatrics, Gynecology and Obstetrics, University Hospitals of Geneva, Geneva, Switzerland
3Faculty of Medicine and Pharmaceutical Sciences, University of Dschang, Dschang, Cameroon
4Department of Gynecology and Obstetrics, District Hospital of Dschang, Dschang, Cameroon
5Department of Gynecology and Obstetrics, Biyem-Assi District Hospital, Yaoundé, Cameroon
6School of Health Sciences, HES-SO University of Applied Sciences and Arts Western Switzerland, Geneva, Switzerland
7Population Epidemiology Unit, Department of Primary Care, University Hospitals of Geneva, Geneva, Switzerland
8Institute of Global Health, University of Geneva, Geneva, Switzerland
9Help and Reintegration Center for Disabled Youth, Obala, Cameroon
10Geneva Foundation for Medical Education and Research, Geneva, Switzerland

Introduction: The World Health Organization's (WHO) global strategy for cervical cancer (CC) elimination has set the target of 70% of women screened in all countries by 2030. Community sensitization through media is often used, but community health workers' (CHW) involvement may contribute to improving screening coverage. We aimed to assess effectiveness and costs of two cervical cancer screening recruitment strategies conducted in a low-resource setting.
Méthode: The study was conducted in the Health District of Dschang, Cameroon. From September 2018 to February 2020, we recruited and screened women for CC in a single-visit program at Dschang District Hospital. During the first 9 months, recruitment was only based on community information channels (CIC). Since June 2019, CHW participation was added in the community after training for CC prevention counselling. Population recruitment was compared between the two strategies by assessing the number of recruited women and direct costs. The intervention's cost-effectiveness was expressed using an incremental cost-effectiveness ratio.
Résultats: During the studied period, 1940 women were recruited, HPV positive rate was 18.6% and 39 cervical intraepithelial neoplasia grade 2 or worse (CIN2+) were diagnosed. Among participants, 69.9% were recruited through CIC as compared to 30.1% by CHW. Cost per screened woman and CIN2+ diagnosed was higher in the CHW group. The ICER was 6.45 USD per screened woman recruited by CHW. In rural areas, recruitment increased from 12.1% to 61.4% between CIC-led and CHW-led intervention. This highlight the importance of training and CHW's deployment to screen hard-to-reach women.
Conclusion: CHW offer an important complement to CIC for expanding coverage in a sub-Saharan African region such as the West Region of Cameroon. CHW play a central role in building awareness and motivation for cervical cancer screening in rural settings.

EFFECT OF A MOBILE APP ON PREHOSPITAL MEDICATION ERRORS DURING SIMULATED PEDIATRIC RESUSCITATION: A RANDOMIZED CLINICAL TRIAL

***Johan N. Siebert (1,2)**; Laurie Bloudeau (3); Christophe Combescure (4); Kevin Haddad (1); Florence Hugon (1); Laurent Suppan (2,5); Frédérique Rodieux (2,6); Christian Lovis (2,7); Alain Gervaix (1,2); Frédéric Ehrler (2,7); Sergio Manzano (1,2); for the Pediatric Accurate Medication in Emergency Situations (PedAMINES) Prehospital Group*

1) Department of Pediatric Emergency Medicine, Geneva Children's Hospital, Geneva University Hospitals, Geneva, Switzerland- 2) Faculty of Medicine, University of Geneva, Geneva, Switzerland- 3) ACE Geneva Ambulances SA, Geneva, Switzerland- 4) Division of Clinical Epidemiology, Department of Health and Community Medicine, University of Geneva and Geneva University Hospital, Geneva, Switzerland- 5) Department of Emergency Medicine, Geneva University Hospitals, Geneva, Switzerland- 6) Division of Clinical Pharmacology and Toxicology, Department of Anesthesiology, Clinical Pharmacology, Intensive Care and Emergency Medicine, Geneva University Hospitals, Geneva, Switzerland 7) Division of Medical Information Sciences, Department of Radiology and Medical Informatics, Geneva University Hospitals, Geneva, Switzerland

Introduction: Medication errors are a leading cause of injury and avoidable harm, affecting millions of people worldwide each year. WHO called for their reduction by 50% in all countries. Children are particularly susceptible to medication errors, but innovative interventions for their prevention in prehospital emergency care are lacking.
Méthode: This nationwide, open-label, multicenter, randomized clinical trial was conducted at 14 emergency medical services centers in Switzerland. The primary objective was to assess the efficacy of an evidence-based mobile app in reducing the occurrence of medication errors compared with conventional preparation methods during simulated pediatric out-of-hospital cardiac arrest cardiopulmonary resuscitation scenarios concerning an 18-month-old child. Participants were tested on sequential preparations of 4 intravenous emergency drugs of varying degrees of preparation difficulty.
Résultats: In total, 150 paramedics were randomly assigned to the app (n=74) or conventional methods arms (n=76) and carried out 600 drug preparations. When accounting for repeated measures, with the app, the proportion of medication errors decreased in absolute terms by 66.5% (95%CI, 32.6%-83.8%; P < .001) and mean time to drug delivery by 47 seconds (95%CI, 27-66: P < .001). The risk of medication errors varied across drugs with conventional methods (19.7%-100%) when compared with the app (4.1%-6.8%).
Conclusion: Compared with conventional methods, the use of a mobile app significantly decreased the rate of medication errors and time to drug delivery for emergency drug preparation in a prehospital setting. Dedicated mobile apps have the potential to improve medication safety and change practices in pediatric emergency medicine.

FUNCTIONAL CONNECTIVITY UNDERLYING COGNITIVE AND PSYCHIATRIC SYMPTOMS IN POST-COVID-19 SYNDROME: IS ANOSOGNOSIA A KEY DETERMINANT?

***Philippe Voruz**, Alexandre Cionca, Isabele Jacot de Alcântara, Anthony Nuber-Champier, Gilles Allali2, Lamyae Benzakour, Marine Thomasson, Patrice H. Lalive, Karl-Olof Lövblad, Olivia Braillard, Mayssam Nehme, Matteo Coen, Jacques Serratrice, Jérôme Pugin, Idris Guessous, Basile N. Landis, Dan Adler, Alessandra Griffa, Dimitri Van De Ville, Frédéric Assal & Julie A. Péron*

1 Clinical and Experimental Neuropsychology Laboratory, Faculty of Psychology, University of Geneva, Switzerland, 2 Neurology Department, Geneva University Hospitals, Switzerland, 3 Faculty of Medicine, University of Geneva, Switzerland, 4 Leenaards Memory Center, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland., 5 Psychiatry Department, Geneva University Hospitals, Switzerland , 6 Diagnostic and Interventional Neuroradiology Department, Geneva University Hospitals, Switzerland, 7 Division and Department of Primary Care Medicine, Geneva University Hospitals, Switzerland, 8 Internal Medicine Department, Geneva University Hospitals, Switzerland, 9 Intensive Care Department, Geneva University Hospitals, Switzerland- 10 Rhinology-Olfactology Unit, Otorhinolaryngology Department, Geneva University Hospitals, Switzerland, 11 Division of Pulmonary Diseases, Geneva University Hospitals, Switzerland- 12 Institute of Bioengineering, Center for Neuroprosthetics, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

Introduction: Lack of awareness of cognitive impairment (i.e., anosognosia) could be a key factor for distinguishing between neuropsychological post-COVID-19 condition phenotypes.
Méthode: Neuropsychological, psychiatric, olfactory, dyspnea, fatigue and quality-of-life tests were administered 227.07 ± 42.69 days post-SARS-CoV-2 infection to 102 patients (mean age: 56.35 years, 65% men, no significant clinical history) who had experienced either a mild (not hospitalized: n = 45), moderate (conventional hospitalization: n = 34) or severe (ICU and mechanical ventilation: n = 23) presentation in the acute phase. Patients were divided into two groups according to the presence or absence of anosognosia for memory deficits (26 anosognosic and 76 nosognosic patients). Of these, 49 patients underwent an MRI.
Résultats: Prevalence of anosognosia didn't differ as function of acute infection severity (mild: 15.60%; moderate: 32.40%; severe: 34.8%). Anosognosic patients performed significantly more poorly on objective cognitive measures. By contrast, they gave significantly more positive subjective assessments of their quality of life, psychiatric status, and fatigue. Interestingly, the proportion of patients exhibiting a lack of consciousness of olfactory deficits was significantly higher in the anosognosic group. Functional connectivity analyses revealed significant decrease in connectivity, in the anosognosic group as compared to the nosognosic group.
Conclusion: Lack of awareness of cognitive disorders and, to a broader extent, impairment of the self-monitoring brain system, may be a key factor for distinguishing between the clinical phenotypes of post-COVID syndrome with neuropsychological deficits.

PRESENTATIONS POSTERS

PAR
ORDRE ALPHABETIQUE SELON
LE NOM DE L'AUTEUR AYANT SOUMIS

P1

FEMALE AUTHORSHIP OF COVID-19 RESEARCH IN MANUSCRIPTS SUBMITTED TO 11 BIOMEDICAL JOURNALS: CROSS SECTIONAL STUDY

Angèle GAYET-AGERON, **Khaoula BEN MESSAOUD***, Mark RICHARDS, Sara SCHROTER*

Service d'épidémiologie clinique, HUG, BMJ Publishing Group

Introduction: Gender disparities have been widely reported in publication records, attainment of prominent authorship positions, contributions made to research, and access to academic promotion. During the covid-19 pandemic, researchers have put unprecedented effort into providing rapid knowledge on SARS-CoV-2 despite new challenges to working conditions. Our aim was to describe prominent authorship positions held by women and the overall percentage of women coauthoring manuscripts submitted during the covid-19 pandemic compared with the previous two years.
Méthode: We conducted a cross-sectional study among nine specialist and two large general medical journals and screened the research manuscripts submitted between 1 January 2018 and 31 May 2021. We assessed first authors' gender (primary outcome). Secondary outcomes were last and corresponding authors' gender; number (percentage) of women on authorship byline in "pre-pandemic" period (1 January 2018 to 31 December 2019) and in "covid-19" and "noncovid-19" manuscripts during pandemic.
Résultats: A total of 63 259 manuscripts were included. The number of female first, last, and corresponding authors respectively were 1313 (37.1%), 996 (27.9%), and 1119 (31.1%) for covid-19 manuscripts (lowest values in Jan-May 2020: 230 (29.4%), 165 (21.1%), and 185 (22.9%)), compared with 8583 (44.9%), 6118 (31.2%), and 7273 (37.3%) for pandemic non-covid-19 manuscripts and 12 724 (46.0%), 8923 (31.4%), and 10 981 (38.9%) for pre-pandemic manuscripts. The adjusted odds ratio of having a female first author in covid-19 manuscripts was <1.00 in all groups (P<0.001) compared with pre-pandemic (lowest in Jan-May 2020: 0.55, 98.75% confidence interval 0.43 to 0.70). The adjusted odds ratio of having a woman as last or corresponding author was significantly lower for covid-19 manuscripts in all time periods (except for the two most recent periods for last author) compared with pre-pandemic (lowest values in Jan-May 2020: 0.74 (0.57 to 0.97) for last and 0.61 (0.49 to 0.77) for corresponding author). The odds ratios for pandemic non-covid-19 manuscripts were not significantly different compared with prepandemic manuscripts. The median percentage of female authors on the byline was lower for covid-19 manuscripts (28.6% in Jan-May 2020) compared with pre-pandemic (36.4%) and non-covid-19 pandemic manuscripts (33.3% in Jan-May 2020). Gender disparities in all prominent authorship positions and the proportion of women authors on the byline narrowed in the most recent period (Feb-May 2021) compared with the early pandemic period (Jan-May 2020) and were very similar to values observed for pre-pandemic manuscripts.
Conclusion: Women have been underrepresented as co-authors and in prominent authorship positions in covid-19 research, and this gender disparity needs to be corrected by those involved in academic promotion and awarding of research grants. Women attained some prominent authorship positions equally or more frequently than before the pandemic on non-covid-19 related manuscripts submitted at some time points during the pandemic

P2

DIFFUSION-MAGNETIC RESONANCE IMAGING PREDICTS DECLINE OF KIDNEY FUNCTION IN CHRONIC KIDNEY DISEASE (CKD) AND IN PATIENTS WITH A KIDNEY ALLOGRAFT

***Lena Berchtold**, Lindsey A. Crowe, Christophe Combescure, Miklos Kassaï, Ibtisam Aslam, David Legouis, Solange Moll, Pierre-Yves Martin, Sophie de Seigneux, Jean-Paul Vallée*

- Service and Laboratory of Nephrology, Department of Internal Medicine Specialties and of Physiology and Metabolism, University and University Hospital of Geneva, Geneva, Switzerland, Service of Radiology, Department of Radiology and Medical Informatics, University And University Hospital of Geneva, Geneva, Switzerland, 3- Division of Clinical-Epidemiology, Department of Health and Community Medicine, University of Geneva and University Hospitals of Geneva, Geneva, Switzerland, 4- Intensive Care Unit, Department of Anaesthesiology, Pharmacology and Intensive Care, University of Geneva, Geneva, Switzerland, 5- Institute of Clinical Pathology, Department of Clinical Pathology, University, Hospital of Geneva, Geneva, Switzerland

Introduction: Kidney cortical interstitial fibrosis is highly predictive of kidney prognosis and is currently assessed by evaluation of a biopsy. Diffusion-weighted magnetic resonance imaging is a promising non-invasive tool to evaluate kidney fibrosis. We recently adapted diffusion weighted imaging sequence for discrimination between the kidney cortex and medulla and found that the cortico-medullary difference in apparent diffusion coefficient (ΔADC) correlated with histological interstitial fibrosis.
Méthode: We assessed whether ΔADC as measured with diffusion-weighted magnetic resonance imaging is predictive of kidney function decline (eGFR decline over 30%) and dialysis initiation in CKD and patients with a kidney allograft in a prospective study encompassing 197 patients. We measured ΔADC in 43 patients with CKD and 154 patients with a kidney allograft. Patients underwent a kidney biopsy and diffusion weighted magnetic resonance imaging within one week of biopsy; median follow-up of 2.2 years. The primary outcome was a rapid decline of kidney function during follow up.
Résultats: Significantly, patients with a negative ΔADC had 5.4 times more risk of rapid decline of kidney function or dialysis (95% confidence interval: 2.29-12.58). After correction for kidney function at baseline and proteinuria, low ADC still predicted significant kidney function loss with a hazard ratio of 4.62 (95% confidence interval 1.56-13.67) independent of baseline age, sex, eGFR and proteinuria.
Conclusion: Thus, low ΔADC can be a predictor of kidney function decline and dialysis initiation in patients with native kidney disease or kidney allograft, independent of baseline kidney function and proteinuria.

P3

IMPACT DU TOUCHER-MASSAGE SUR LE VECU DES PATIENTS SOUFFRANT DE DOULEURS CHRONIQUES ET SUR LA RELATION SOIGNANT-SOIGNE EN SOINS STATIONNAIRES : UNE ETUDE MIXTE

Maria Goreti da Rocha Rodrigues, Ph.D, ***Catherine Bollondi Pauly****, RN, Monique Boegli, RN, François Curtin, MD, MPhil, MBA, Christophe Luthy, MD, Jules Desmeules, MD, Christine Cedraschi, PhD.*

Directions des soins. Pôle pratiques cliniques, Service de pharmacologie et toxicologie clinique, Service de médecine et réadaptation-Beau Séjour

Introduction: La douleur chronique peut toucher jusqu'à 31% la population générale à travers le monde. Les interventions non pharmacologiques sont de plus en plus recommandées en complément des traitements médicamenteux. Le but de cette étude était d'évaluer l'impact du Toucher Massage (TM) sur l'expérience des patients atteints de douleur dans un service de médecine interne de réhabilitation.
Méthode: Un essai clinique en cluster incluant une partie qualitative a été conduit dans deux unités de soins. Les participants ont bénéficié de 4 séances de massage (TM =Groupe intervention GI, vs une machine=Groupe contrôle GC) sur 2 semaines. La perception globale du changement en termes de douleur (PGIC) ainsi que l'anxiété, la dépression et la relation patient-soignant ont été évalués. Des entretiens semi dirigés et des focus groupes ont complété l'étude.
Résultats: L'étude s'est déroulée sur 18 mois. Malgré le Covid-19, 82 participants ont pu être inclus. Les participants qui ont reçu un TM ont eu tendance à percevoir un changement global plus important de l'impact de la douleur que les participants qui ont reçu un massage mécanique. Aucun effet statistiquement significatif n'a pu être mis en évidence sur les autres variables. Six thèmes ont émergé des entretiens (n=16 GI): bien-être, sensation de détente, lien avec le masseur, environnement serein, bénéfices du toucher, souvenirs ou émotions qui émergent.
Conclusion: Cette étude démontre avec une méthodologie robuste que le TM a un impact positif sur la perception du soulagement de la douleur chez les patients souffrant de douleur chronique. Le TM, perçu comme une expérience subjective positive constitue une intervention soignante accessible, réalisable et efficiente pour traiter les patients souffrant de douleur chronique.

P4

THE BIOLOGICAL SUBSTRATE OF THE MOTORIC COGNITIVE RISK SYNDROME: A PILOT STUDY USING AMYLOID-/TAU-PET AND MR IMAGING

Giulia Bommarito1*, Valentina Garibotto2, Giovanni B. Frisoni3, Federica Ribaldi3, Sara Stampacchia2, Frédéric Assal1, Stéphane Armand1,4, Gilles Allali1,5,6 Alessandra Griffa1*

1. Department of Clinical Neurosciences, Division of Neurology, Geneva University Hospitals and Faculty of Medicine, University of Geneva, Geneva, Switzerland- 2. Division of Nuclear Medicine and Molecular Imaging, Geneva University Hospitals and NIMTlab, Geneva University, Geneva, Switzerland- 3. Memory Clinic and LANVIE-Laboratory of Neuroimaging of Aging, Geneva University Hospitals and University of Geneva, Geneva, Switzerland- 4. Kinesiology Laboratory, Geneva University Hospitals and University of Geneva, Switzerland- 5. Department of Neurology, Division of Cognitive & Motor Aging, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY, USA- 6. Leenaards Memory Center, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland- 7. Institute of Bioengineering, Center of Neuroprosthetics, Ecole Polytechnique Fédérale De Lausanne (EPFL), Geneva, Switzerland

Introduction: The motoric cognitive risk (MCR) represents a pre-dementia condition, able to identify older adults at risk of developing dementia. Previous studies variably related MCR to an increased risk of Alzheimer's disease (AD), vascular dementia or both. However, the biological substrate of MCR is still matter of debate. Here, we explored the association between MCR and imaging features of AD, vascular disease or unspecific neurodegeneration.
Méthode: Twenty participants referring to the Memory Center of the Geneva University Hospitals were recruited and classified as MCR+ or MCR− based on their gait speed, with respect to reference values derived from a local cohort of healthy older adults. Amyloid and tau uptakes were derived from PET imaging. White matter hyperintensities (WMH), temporal atrophy, lateral ventricular volume (LVV) and microstructural damage of gait-related white matter tracts (i.e. corpus callosum, cortico-spinal tract and superior corona radiata) were derived from MRI. Imaging parameters were compared between groups.
Résultats: MCR+ (n=8, mean age 72.5±6.3 years, 2 females) and MCR- (n=12, mean age 73.7±6.7 years, 5 females) patients did not differ in terms of amyloid or tau burden, temporal atrophy, WMH volume or microstructural damage at the level of the corpus callosum and cortico-spinal tract. MCR+ patients had significantly larger LVV and higher mean/axial/radial diffusivity values at the level of the superior corona radiata (p= .026 and p= .007, p= .006 and p= .047 respectively), compared to MCR-.
Conclusion: MCR could be not related uniquely to AD or vascular pathologies. Ventricular enlargement and the damage of the adjacent white matter tracts, more than a dementia sub-type specific pathogenic pathway, could characterize MCR.

P5
IS CONTRAST MEDIA REALLY NEEDED FOR FOLLOW-UP MRI OF UNTREATED INTRACRANIAL MENINGIOMAS?

***José Boto**, Ramona Guatta, Aikaterini Fitsiori, Jeremy Hofmeister, Torstein R. Meling, Maria Isabel Vargas*

Division of Neuroradiology, Geneva University Hospital, Division of Neurosurgery, Geneva University Hospital - Division of Neurosurgery, Lugano Civic Regional Hospital

Introduction: Recent concerns relating to tissue deposition of gadolinium are favoring non-contrast MRI whenever possible. The purpose of this study was to assess the necessity of gadolinium-contrast for follow-up MRI of untreated intracranial meningiomas.
Méthode: One-hundred-twenty-two patients (35 males, 87 females) with meningiomas who underwent brain MRI between May 2007 and May 2019 in our institution were included in this retrospective cohort study. One-hundred-thirty-two meningiomas were analyzed: 73 non-skull base (55%) versus 59 skull base (45%), 93 symptomatic (70%) versus 39 asymptomatic (30%). Fifty-nine meningiomas were operated: 54 WHO grade I (92%), 5 WHO grade II (8%). All meningiomas were segmented on T1-3D-Gd and 2D T2WI. Agreement between T1-3D-Gd and 2D-T2WI segmentations was assessed by the intraclass correlation coefficient.
Résultats: The mean time period between MRI scans was 1,485 days (range 760-3,810 days). There was excellent agreement between T1-3D-Gd and T2WI segmentations ($p<0.001$): tumor volume (T1-3D-Gd: 9,012.15±19,223.03 mm3; T2WI, 8,528.45±18,368.18 mm3; ICC=0.996), surface area (ICC=0.989), surface/volume ratio (ICC=0.924), maximum-3D-diameter (ICC=0.986), maximum-2D-diameter in the axial (ICC=0.990), coronal (ICC=0.982), and sagittal planes (ICC=0.985), major axis length (ICC=0.989), minor axis length (ICC=0.992), least axis length (ICC=0.988). Tumor growth also showed good agreement ($p<0.001$) estimated as 461.87±2,704.1 mm3/year on T1-3D-Gd and 556.64±2,624.02 mm3/year on T2WI.
Conclusion: Our results show excellent agreement between size and growth of meningiomas derived from T1-3D-Gd and 2D-T2WI, suggesting the use of non-contrast MRI may be appropriate for the follow-up of untreated meningiomas, which would be both cost effective and avert risks associated with contrast media.

P6
IL-8: A BIOMARKER TO DISTINGUISH GBS FROM CIDP

***Gautier Breville**, Agustina M. Lascano, Patrice H. Lalive*

Service de Neurologie, Département des Neurosciences Cliniques, HUG

Introduction: Guillain-Barré syndrome (GBS) and chronic inflammatory demyelinating polyneuropathy (CIDP) are immune-mediated neuropathic diseases, with incompletely understood pathophysiological mechanisms, involving cytokines. Interleukine-8 (IL-8) is a pro-inflammatory chemokine mainly secreted by circulating monocytes and local macrophages. It plays a crucial role in the inflammatory cascade by inducing a chemotaxis gradient, cell proliferation, motility and migration, and oxidative burst.
Méthode: We performed retrospective immunoassay of IL-8 in CSF, collected at the University Hospitals of Geneva between 2010 and 2018, from patients diagnosed with GBS (n=45) and with CIDP (n=30) according to Brighton and European Federation of Neurological Societies/Peripheral Nerve Society criteria by a physician blinded to biological results.
Résultats: CSF IL-8 was higher in GBS (median: 83.9 pg/ml) than in CIDP (41.0 pg/ml) ($p<0.001$). Receiver operating characteristic analyses indicated that the optimal IL-8 cut-off was 70 pg/ml. Above this value, patients were more likely to present GBS than CIDP (specificity 96.7%, sensitivity 64.4%, positive predictive value (PPV) 96.7%, negative predictive value (NPV) 64.4%). Among GBS subcategories, IL-8 was higher in acute inflammatory demyelinating polyneuropathy (AIDP, median: 101.8 pg/ml) than in other GBS variants (median: 53.7 pg/ml). In addition, with CSF IL-8 above 70 pg/ml, patients were more likely to present AIDP than acute-onset CIDP ($p<0.001$; specificity 100%, sensitivity 78.8%, PPV 100%, NPV 46.2%) or other CIDP with non-acute presentation ($p<0.0001$; specificity 95.8%, sensitivity 78.8%, PPV 96.3%, NPV 76.7%).
Conclusion: This retrospective study shows that CSF IL-8 concentration, when measured at the time of the initial diagnostic workup, is significantly increased in GBS as compared to CIDP, with a threshold of 70 pg/mL for specificity and positive predictive value of 96% for GBS. Among GBS subgroups, IL-8 is more elevated in AIDP. Clinical relevance of CSF IL-8 measurement is the differentiation between AIDP and acute-onset CIDP.

P7

THE EFFECTS OF TIME-RESTRICTED EATING VS. STANDARD DIETARY ADVICE ON WEIGHT, METABOLIC HEALTH AND THE CONSUMPTION OF PROCESSED FOOD: A PRAGMATIC RANDOMISED CONTROLLED TRIAL IN COMMUNITY-BASED ADULTS

Nicholas Edward Phillips *(HUG), Julie Mareschal (HUG), Nathalie Schwab, Emily N.C. Manoogian, Sylvie Borloz, Giada Ostinelli, Aude Gauthier-Jaques, Sylvie Umwali, Elena Gonzalez Rodriguez, Daniel Aeberli, Didier Hans, Satchidananda Panda, Nicolas Rodondi, Felix Naef Tinh-Hai Collet (HUG, corresponding author & PI)*

Service d'endocrinologie, diabétologie, nutrition et éducation thérapeutique, Departement de médecine- HUG

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Introduction: Weight loss is key to control the increasing prevalence of metabolic syndrome (MS) and its com-ponents, i.e. central obesity, hypertension, prediabetes, and dyslipidaemia. The goals of our study were two-fold. First, we characterised the relationships between eating duration, unprocessed and processed food consumption, and metabolic health.
Méthode: During 4 weeks of observation, 213 adults used a smartphone application to record food and drink consumption, which was annotated for food processing levels following the NOVA classi-fication. Low consumption of unprocessed food and low physical activity showed significant as-sociations with multiple MS components. Second, in a pragmatic randomised controlled trial, we compared the metabolic benefits of 12h time-restricted eating (TRE) to standard dietary advice (SDA) in 54 adults with an eating duration >14h and at least one MS component.
Résultats: After 6 months, those randomised to TRE lost 1.6% of initial body weight (SD 2.9, p=0.01), com-pared to the absence of weight loss with SDA (-1.1%, SD 3.5, p=0.19). There was no significant difference in weight loss between TRE and SDA (between-group difference -0.88%, 95% confi-dence interval -3.1 to 1.3, p=0.43).
Conclusion: Our results show the potential of smartphone records to predict metabolic health and highlight that further research is needed to improve individual responses to TRE, such as a shorter eating window or its actual clock time.

P8

BACTEREMIA DETECTION WITH ADDITIONAL BLOOD CULTURES IN HOSPITALIZED PATIENTS IN A TERTIARY CARE HOSPITAL

Marie-Céline Zanella, MD ; ***Mikael de Lorenzi-Tognon****, MD-PhD ; Adrien Fischer, PhD; Nathalie Vernaz, PharmD, PhD ; Jacques Schrenzel, MD*

1 Division of Infectious Diseases, Department of Medicine, Geneva University Hospitals, Geneva, Switzerland. - 2 Bacteriology Laboratory, Department of Diagnostics, Geneva University Hospitals, Geneva, Switzerland.- 3 Medical Directorate, Geneva University Hospitals, Geneva, Switzerland.- 4 Genomic Research Laboratory, Faculty of Medicine, University of Geneva, Geneva, Switzerland.

Introduction: Blood cultures (BC) are used worldwide to detect bloodstream infections, despite their known low yield and non-negligible false-positive rate, thus exposing patients to repeated BC and potential unnecessary antibiotics. We sought to assess the performance and clinical relevance of collecting additional BC for true bacteremia detection.
Méthode: Retrospective cohort study of hospitalized adult, non-hematopoietic stem cell transplant recipients with ≥2 BC sets collected from January 1, 2019, through January 1, 2020, at a Swiss university tertiary care hospital. The primary outcome was to estimate the likelihood of a positive BC result and diagnosis of a true bacteremia with additional BC sets when the first is still incubated after 24 hours.
Résultats: Mean age of study participants was 69.5 years (±18.3); 45.2% were women. Among the 23 088 BC bottles included (2863 unique patients), the positivity rate was 8.34% with 0.29% identified as contaminants. mTTP was ≤24 hours in 76.8% of all positive BC, with a predominance of Gram-negative bacilli and anaerobic microorganisms. The probability of detecting true bacteremia with additional BC sets was 4.1%, and 2.6% when excluding contaminants and BC collected for endovascular infection.
Conclusion: There was a low probability of detecting true bacteremia by drawing additional BC after 24 hours. These findings suggest that further studies and new guidelines are needed to optimize BC strategies and limit the order of additional BC to specific situations, such as endovascular infections, in order to improve the use of diagnostic resources and patient management, as well as a reduction in direct/indirect costs.

P9

SAFETY AND EFFICACY OF COMA INDUCTION FOLLOWING FIRST-LINE TREATMENT IN STATUS EPILEPTICUS. A 2-CENTER STUDY

Pia De Stefano, *MD1, Sira M. Baumann4, Saskia Semmlack, MD2, Stephan Rüegg, MD3,4, Stephan Marsch, MD2,4, Margitta Seeck, MD PhD1, Raoul Sutter, MD2-6*

1 EEG and Epilepsy Unit, Department of Clinical Neurosciences and Faculty of Medicine of Geneva, University Hospital of Geneva, Geneva, Switzerland- 2 Department of Intensive Care, University Hospital Basel, Basel, Switzerland- 3 Division of Neurophysiology, Department of Neurology, University Hospital Basel, Basel, Switzerland- 4 Medical faculty, University of Basel, Basel, Switzerland- 5 Department of Clinical Research, University of Basel, Basel, Switzerland

Introduction: To explore the safety and efficacy of artificial coma induction to treat status epilepticus (SE) immediately after first-line antiseizure treatment instead of following the recommended approach of first using second-line drugs.
Méthode: Clinical and electrophysiologic data of all adult patients treated for SE from 2017 to 2018 in the Swiss academic medical care centers from Basel and Geneva were retrospectively assessed. Primary outcomes were return to premorbid neurologic function and in-hospital death. Secondary outcomes were the emergence of complications during SE, duration of SE, and intensive care unit (ICU) and hospital stays.
Résultats: Of 230 patients, 205 received treatment escalation after first-line medication. Of those,27.3% were directly treated with artificial coma and 72.7% with second-line nonanesthetic antiseizure drugs. Of the latter,16.6% were subsequently put on artificial coma after failure of second-line treatment. While outcomes and complications did not differ compared to patients with treatment escalation according to the guidelines, coma induction after first-line treatment was associated with shorter SE duration and ICU and hospital stays.
Conclusion: Early induction of artificial coma is performed in more than every fourth patient and especially in younger patients presenting with convulsions and more severe SE. Our data demonstrate that this aggressive treatment escalation was not associated with an increase in complications but with shorter duration of SE and ICU and hospital stays

P10

ADDITION OF DIGITAL VIA TO CONVENTIONAL NAKED-EYE EXAMINATION FOR TRIAGE OF HPV-POSITIVE WOMEN: A STUDY CONDUCTED IN A LOW-RESOURCE SETTING

***Eva Dufeil**, Bruno Kenfack, Evelyn Tincho, Jovanny Fouogue, Ania Wisniak, Jessica Sormani Pierre Vassilakos, Patrick Petignat*

Faculty of Medicine, University of Geneva, Geneva, Switzerland, Faculty of Medicine and Pharmaceutical Science, University of Dschang, Dschang, Cameroon Department of Gynecology and Obstetrics, District Hospital of Dschang, Dschang, Cameroon Department of Gynecology and Obstetrics, Faculty of Medicine and Biomedical Sciences, Centre Hospitalier Universitaire (CHUY), Yaoundé, Cameroon, Department of Obstetrics and Gynecology, Bafoussam Regional hospital, Bafoussam, Cameroon, Gynecology Division, Department of Gynecology and Obstetrics, University Hospitals of Geneva, Geneva, Switzerland, Population Epidemiology Unit, Department of Primary Care, Geneva University Hospitals, Geneva, Switzerland, School of Health Sciences, HES-SO University of Applied Sciences and Arts Western Switzerland, Geneva, Switzerland
Geneva Foundation for Medical Education and Research, Geneva, Switzerland

Introduction: World Health Organization guidelines for cervical cancer screening recommend HPV testing followed by visual inspection with acetic acid (VIA) for triage if HPV positive. In order to improve visual assessment and identificationof cervical intraepithelial neoplasia grade 2 and worse (CIN2+), providers may use visual aids such as digital cameras. The aim is to determine whether combined examination by naked-eye and digital VIA (D-VIA) improves detection of CIN2+ as compared to the conventional evaluation.
Méthode: Women (30–49 years) living in Dschang (West Cameroon) were prospectively invited to a cervical cancer screening campaign. Primary HPV-based screening was followed by VIA and D-VIA if HPV-positive. Health care providers independently defined diagnosis (pathological or non-pathological) based on naked-eye VIA and D-VIA. Decision to treat was based on combined examination (VIA and D-VIA). Cervical biopsy and endocervical curettage were performed in all HPV-positive participants and considered as reference standard. Diagnostic performance of individual and combined naked-eye VIA and D-VIA was evaluated.
Résultats: Due to the COVID-19 pandemic, the study had to terminate prematurely. A total of 1,081 women with a median age of 40 (IQR 35.5-45) were recruited. HPV positivity was 17.4% (n=188) and 26 (14.4%) had CIN2+. Naked-eye VIA and D-VIA sensitivity was 80.8% (95% CI 60.6-93.4) and 88.5% (95% CI 69.8-97.6), and specificity was 31.2% (95%CI24-39.1) and 31.6% (95%CI24.4-39.6), respectively. The combination of both methods yielded a sensitivity of 92.3% (95% CI74.9-99.1) and specificity of 23.2% (95%CI16.8-30.7). A trend towards improved sensitivity was observed, but did not reach statistical significance.
Conclusion: Addition of D-VIA to conventional naked-eye examination may be associated with improved CIN2+ identification. Further studies including a larger sample size are needed to confirm these results.

P11

INTRAVENOUS RTPA BEFORE THROMBECTOMY VERSUS THROMBECTOMY ALONE IN STROKES WITH UNKNOWN TIME OF ONSET

***Jose Bernardo Escribano Paredes**; Alexander Salerno; Julian Klug; Elisabeth Dirren; Nicolae Sanda; Christophe Bonvin; Vincent Dunet; Maria Vargas; Guillaume Saliou; Paolo Machi; Patrik Michel; Emmanuel Carrera*

Service de Neurologie, Hôpitaux Universitaires de Genève;- Service de Neurologie, Centre Hospitalier Universitaire Vaudois, Lausanne;- Service de Neurologie, Centre Hospitalier du Valais Roman;- Service de Radiologie, Centre Hospitalier Universitaire Vaudois, Lausanne;- Service de Neuroradiologie, Hôpitaux Universitaires de Genève;

Introduction: Endovascular treatment (EVT) alone is effective in patients with unknown time of onset (unwitnessed and wake-up strokes) and large vessel occlusion. However, it is unknown whether intravenous thrombolysis (IVT) administered before EVT provides additional benefits. Here, we compared combined therapy vs EVT alone in patients with unknown time of onset and a favorable CT perfusion pattern.
Méthode: We retrospectively analyzed 100 consecutive patients admitted to the Geneva and Lausanne University Hospitals, with i) unknown time of onset, ii) distal ICA and or proximal MCA occlusion, iii) favorable perfusion pattern on perfusion CT (DEFUSE 3 criteria). Efficacy and safety outcomes were compared between patients who received IVT (rtPA 0.9mg/kg) before EVT vs EVT alone.
Résultats: 100 patients were included, (51 with EVT alone and 49 with EVT and IVT), median age 77 (IQR 65-84)years. Baseline characteristics were similar between treatment groups. Functional independence (mRS 0-2) at 90days was more frequent when IVT was administered before EVT (55 vs 39%; p=0.044). Successful recanalization (TICI 2b-3) was more frequently achieved in the IVT and EVT group (92 vs 78%; p=0.011). Infarct growth was larger in patients treated with EVT alone (44 (18-74) vs 32 (8-68)ml; p=0.034). There were two symptomatic intracranial hemorrhage (1 in each group; p=0.940).
Conclusion: IVT could increase the benefit of EVT in stroke with unknown time of onset in patients selected with perfusion imaging. Further randomized controlled trials are needed to confirm the efficacy and safety of this therapeutic alternative.

P12

IN SITU SIMULATION TRAINING FOR PARENTAL PRESENCE DURING CRITICAL SITUATIONS IN PICU: AN OBSERVATIONAL STUDY

*Alice Bordessoule, **Cristina Felice-Civitillo**, Serge Grazioli, Francisca Barcos, Kevin Haddad, Peter C. Rimensberger, Angelo Polito*

Pediatric and Neonatal Intensive Care Unit, Department of Pediatrics, Gynecology and Obstetrics, University Hospitals of Geneva, University of Geneva, Rue Willy Donze 6, 1205 Geneva, Switzerland

Introduction: Family presence during invasive procedures or cardiopulmonary resuscitation (CPR) is a part of the family-centered approach in pediatric intensive care units (PICUs). We established a simulation program aiming at providing communication tools to healthcare professionals of the PICU of Geneva Children's Hospital.
Méthode: The goal of our study was to evaluate the impact and the acceptance of this program on the stress of PICU professionals. An observational study was performed using a questionnaire to measure pre- and post-simulation stress and the degree of satisfaction of the participants. Primary outcomes were the difference in perceived stress level before and after the simulation and the degree of satisfaction of healthcare professionals. The impact of previous experience with family members during critical situations or CPR was evaluated by variation in perceived stress level.
Résultats: 40 simulations with four different simulation scenarios and various types of parental behavior, performed by professional actors, were completed during a 1-year period. Overall, 201 questionnaires were analyzed. Perceived stress associated with parental presence decreased from a pre-simulation value of 6 (IQR, 4–7) to 4 (IQR, 2–5) post-simulation on a scale of 1–10. However, in 25.7% of cases, the individually perceived post-simulation stress level was higher than the pre-simulation one. Satisfaction of the participants was high with a median of 10 (IQR, 9–10) out of 10.
Conclusion: A simulation program helps reduce PICU team emotional stress associated with the presence of family members during critical situations or CPR, and is welcomed by PICU team members.

P13

DIAGNOSTIC VALUE OF AMYLOID-PET AND TAU-PET: A HEAD-TO-HEAD COMPARISON

Daniele Altomare, PhD; Camilla Caprioglio, MS; Frédéric Assal, MD; Gilles Allali, MD, PhD; Aline Mendes, MD; Federica Ribaldi, MS; Kelly Ceyzeriat, PhD; Marta Martins, MS; Szymon Tomczyk, PhD; Sara Stampacchia, PhD; Alessandra Dodich, PhD; Marina Boccardi, PhD; Christian Chicherio, PhD; Giovanni B. Frisoni, MD; ***Valentina Garibotto****, MD*

Médecine nucléaire et imagerie moléculaire, Radiologie, Centre de la mémoire

Introduction: The evaluation of diagnostic tests needs specific investigations to assess their individual and combined diagnostic performance, namely in the case of complex procedures such as PET imaging. Here we compared myloid-PET and tau-PET in a memory clinic population.
Méthode: Clinical reports of 136 patients were randomly assigned to two diagnostic pathways: AMY-TAU, amyloid-PET is presented before tau-PET; and TAU-AMY, tau-PET is presented before amyloid-PET. Two neurologists independently assessed all reports with a balanced randomized design, and expressed etiological diagnosis and diagnostic confidence (50-100%): i) at baseline; ii) after the first exam (amyloid-PET for the AMY-TAU pathway, and tau-PET for the TAU-AMY pathway); and iii) after the remining exam.
Résultats: Amyloid-PET and tau-PET, when presented as the first exam, resulted in a change of etiological diagnosis in 28% ($p=0.006$) and 28% ($p<0.001$) of cases, and diagnostic confidence increased by 18% ($p<0.001$) and 19% ($p<0.001$) respectively, with no differences between exams ($p>0.05$). We observed a stronger impact of a negative amyloid-PET versus a negative tau-PET ($p=0.014$). When added as the second exam, amyloid-PET and tau-PET resulted in a further change in etiological diagnosis in 6% ($p=0.077$) and 9% ($p=0.149$) of cases, and diagnostic confidence increased by 4% ($p<0.001$) and 5% ($p<0.001$) respectively, with no differences between exams ($p>0.05$).
Conclusion: Amyloid-PET and tau-PET significantly impacted diagnosis and diagnostic confidence in a similar way, although a negative amyloid-PET has a stronger impact on diagnosis than a negative tau-PET. Adding either of the two as second exam further improved diagnostic confidence.

P14

LIQUID BIOPSY FOR PATIENT CHARACTERIZATION IN CARDIOVASCULAR DISEASE: VERIFICATION AGAINST MARKERS OF CYTOCHROME P450 AND P-GLYCOPROTEIN ACTIVITIES

Pauline Gosselin*, Brahim Achour, Jean Terrier, Yvonne Gloor, Zubida M. Al-Majdoub, Thomas M. Polasek, Youssef Daali, Amin Rostami-Hodjegan and Jean-Luc Reny*

Médecine interne Générale - HUG

Introduction: Between-patient variability in drug response is a significant challenge for healthcare providers and current available tools for treatment personalization are limited. In this study, we aimed to further develop a liquid biopsy assay, a minimally invasive method for the characterization of a patient's drug metabolic and elimination capacity. To validate this new approach, we verified expression measurements of cytochrome P450 enzymes and the transporter P-glycoprotein in liquid biopsy against genotype and activity phenotype (assessed by the Geneva cocktail approach) in 30 patients with cardiovascular disease in a hospital setting.
Méthode: Exosomes were extracted from patients' plasma, followed by quantitative analysis using transcriptomic and proteomic methods. The levels of liver enzymes and transporters were calculated after accounting for differences in exosomal shedding (from tissue to plasma). Expression in liquid biopsy was then correlated to activity phenotype and genotype.
Résultats: Expression in liquid biopsy correlated with activity phenotype for CYP1A2, CYP2B6, CYP2C9, CYP3A, and P-gp ($r = 0.44–0.70$, $P \leq 0.05$). Although genotype offered a degree of stratification, large variability in activity (up to 157%) and expression in liquid biopsy (up to 117%) was observed within each genotype, indicating a mismatch between genotype and phenotype.
Conclusion: The correlation data presented herein further support using liquid biopsy as a patient characterization approach applicable for precision dosing.

P15

VALIDATION OF THE PERFORM-FES: A NEW FEAR OF FALLING SCALE FOR HOSPITALIZED GERIATRIC PATIENTS

Cecilia Ferrer Soler (1), Clémence Cuvelier (1), ***Mélany Hars*** *(2), François R. Herrmann (1,3), Adrienne Charpiot (4), Catherine Ducharne Wieczorkiewicz (1,3), Olivier Bruyère (4), Charlotte Beaudart (4), Dina Zekry (3), Gabriel Gold (1), Andrea Trombetti (1,2)*

(1) Division of Geriatrics, Department of Rehabilitation and Geriatrics, Geneva University Hospitals and Faculty of Medicine, Thônex, Switzerland- (2) Division of Bone Diseases, Department of Medicine, Geneva University Hospitals and Faculty of Medicine, Geneva, Switzerland-(3) Division of Internal Medicine for the Aged, Department of Rehabilitation and Geriatrics, Geneva University Hospitals and Faculty of Medicine, Thônex, Switzerland-(4) Division of Public Health, Epidemiology and Health Economics, World Health Organization Collaborating Center for Public Health Aspects of Musculoskeletal Health and Ageing, University of Liège, Liège, Belgium

Introduction: Fear of falling is highly prevalent in older adults and associated with numerous negative health events. The main objective of this study was to validate a scale to assess fear of falling, based on performance in real situation (Perform-FES), in a hospitalized geriatric population.
Méthode: In this cross-sectional study, 55 patients (mean age: 85.3 years; 58% women) hospitalized in a geriatric hospital in Geneva (Switzerland) were enrolled. The Perform-FES scale was administered to all patients in conjunction with four other fear of falling scales. We determined the floor and ceiling effects, internal consistency, reliability, construct validity, and discriminative power of the Perform-FES scale.
Résultats: The Perform-FES scale did not demonstrate any significant floor or ceiling effect. It had a good internal consistency (Cronbach's alpha = 0.78) and an excellent reliability (intraclass correlation coefficient = 0.94). Regarding convergent validity, good correlations were shown between the score obtained on the Perform-FES scale and those obtained on other fear of falling scales. Also, the Perform-FES scale was able to discriminate patients with severe functional impairments (area under the ROC curve = 0.81) and had significantly better discriminating performance than other fear of falling scales.
Conclusion: Findings suggest that the Perform-FES scale has good psychometric properties and may be a relevant tool to assess fear of falling in a geriatric hospitalized population. Future research should focus in particular on assessing the sensitivity to change and the predictive value of this scale in longitudinal studies, and its validity in other populations.

P16

RABIES VACCINATION AND MULTIPLE SCLEROSIS RELAPSE: A RETROSPECTIVE COHORT STUDY

Angela Huttner*, Agustina M Lascano, Serge Roth, Jean-Marc Schwob, Gilles Eperon, Claire-Anne Siegrist, Patrice H Lalive*

Neurologie, Centre de Vaccinologie, Maladies infectieuses, Maladies tropicales

Introduction: No studies assessing rabies vaccine (RV) tolerability in persons with multiple sclerosis (MS) have been conducted. Given the lack of safety data, RV is recommended essentially only for post-exposure prophylaxis, which is difficult to administer effectively in many rabies-endemic countries. We sought to determine whether RV administration as pre-exposure prophylaxis was associated with MS relapse.
Méthode: This retrospective cohort study compared the clinical courses of MS patients in the year before and after rabies vaccination. The year before vaccination was defined as the pre-exposure risk period, the three months thereafter as the exposure-risk period, and the following nine months as the post-risk period. All adult MS patients immunized with RV between 2014 and 2018 and with available medical records in the two-year window were included. The primary outcome was the incidence of symptomatic MS relapse in the exposure-risk period versus the pre-exposure period.
Résultats: Fifty-five patients received at least one dose of RV. Most (38/55, 69%) were female; mean age was 38.5 years (SD ±9.2). While 21 (38%) patients experienced 24 relapses in the year before vaccination, only three (5%) experienced one relapse each in the post-vaccination exposure-risk period; three others (5%) experienced a total of four relapses in the subsequent post-risk period. The annualized relapse rates in the pre-exposure, exposure-risk, and post-risk periods were 0.44, 0.22, and 0.10, respectively (rate ratio for exposure-risk to pre-exposure periods, 0.509 [95% CI 0.098-1.677]).
Conclusion: In this cohort, rabies vaccination was not associated with clinical MS relapse. Larger, prospective studies are needed to confirm these results.

P17

IMPACT OF SARS-COV-2 INFECTION (COVID-19) ON CYTOCHROMES P450 ACTIVITY ASSESSED BY THE GENEVA COCKTAIL

Camille Lenoir, *Jean Terrier, Yvonne Gloor, François Curtin, Victoria Rollason, Jules Alexandre Desmeules, Youssef Daali, Jean-Luc Reny et Caroline Flora Samer*

Pharmacologie et Toxicologie Cliniques, Médecine Interne Générale

Introduction: Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, is a severe acute respiratory syndrome with an underlying inflammatory state. We have previously demonstrated that acute inflammation modulates cytochromes P450 (CYPs) activity in an isoform-specific manner. We therefore hypothesized that COVID-19 might also impact CYP activity, and thus aimed to evaluate the impact of acute inflammation in the context of SARS-CoV-2 infection on the six main human CYPs activity.
Méthode: This prospective observational study was conducted in 28 patients hospitalized at the Geneva University Hospitals (Switzerland) with a diagnosis of moderate to severe COVID-19. They received the Geneva phenotyping cocktail orally during the first 72 hours of hospitalization and after 3 months. Capillary blood samples were collected 2 hours after cocktail administration to assess the metabolic ratios (MRs) of CYP1A2, 2B6, 2C9, 2C19, 2D6, and 3A. C-reactive protein (CRP), interleukin 6 (IL-6), and tumor necrosis factor-α (TNF-α) levels were also measured in blood.
Résultats: CYP1A2, CYP2C19, and CYP3A MRs decreased by 52.6% ($P = 0.0001$), 74.7% ($P = 0.0006$), and 22.8% ($P = 0.045$), respectively, in patients with COVID-19. CYP2B6 and CYP2C9 MRs increased by 101.1% ($P = 0.009$) and 55.8%($P = 0.0006$), respectively. CYP2D6 MR variation did not reach statistical significance ($P = 0.072$). As expected, COVID-19 was a good acute inflammation model as mean serum levels of CRP, IL-6, and TNF-α were significantly ($P < 0.001$) higher during SARS-CoV-2 infection.
Conclusion: CYP activity are modulated in an isoform-specific manner by SARS-CoV-2 infection. The pharmacokinetics of CYP substrates, whether used to treat the disease or as the usual treatment of patients, could be therefore clinically impacted.

P18

ANTIBODY PERSISTENCE IN THE FIRST 6 MONTHS FOLLOWING SARS-COV-2 INFECTION AMONG HOSPITAL WORKERS: A PROSPECTIVE LONGITUDINAL STUDY

Arnaud G L'Huillier, *Benjamin Meyer,* ***Diego O Andrey***, *Isabelle Arm-Vernez, Stephanie Baggio, Arnaud Didierlaurent, Christiane S Eberhardt, Isabella Eckerle, Carole Grasset-Salomon, Angela Huttner, Klara M Posfay-Barbe, Irene Sabater Royo, Jacques A Pralong, Nicolas Vuilleumier, Sabine Yerly, Claire-Anne Siegrist, Laurent Kaiser, Geneva Centre for Emerging Viral Diseases*

Pédiatrie Générale, HUG

Introduction: We aimed to evaluate longitudinally the persistence of humoral immunity for up to 6 months in a cohort of hospital employees with mild coronavirus disease 2019 (COVID-19).
Méthode: We measured anti-RBD (receptor binding domain of viral spike protein), anti-N (viral nucleoprotein) and neutralizing antibodies at 1, 3 and 6 months after mostly mild COVID-19 in 200 hospital workers using commercial ELISAs and a surrogate virus neutralization assay.
Résultats: SARS-CoV-2 antibodies persisted in all participants for up to 6 months. Anti-RBD geometric mean concentrations (GMCs) progressively increased between months 1 (74.2U/mL), 3 (103.2U/mL; $p<0.001$), and 6 (123.3U/mL; $p<0.001$) in the whole cohort. Anti-N antibodies were detectable in >97% at all times. Neutralizing antibodies were detectable in 99.5% of participants at 6 months. Their GMC progressively decreased between months 1 (20.1AU/mL), 3 (15.2AU/mL; $p<0.001$) and 6 (9.4 AU/mL; $p<0.001$). RBD-ACE2-inhibiting antibody titres and anti-RBD antibody concentrations strongly correlated at each timepoint (all $r > 0.86$, $p < 0.001$). Disease severity was associated with higher initial anti-RBD and RBD-ACE2-inhibiting antibody titres, but not with their kinetics.
Conclusion: Neutralizing antibodies persisted at 6 months in almost all participants, indicating more durability than initially feared. Anti-RBD antibodies persisted better and even increased over time, possibly related to the preferential detection of progressively higher-affinity antibodies.

P19
GLYCINE INCREASES FAT-FREE MASS IN MALNOURISHED HAEMODIALYSIS PATIENTS: A RANDOMIZED DOUBLE-BLIND CROSSOVER TRIAL

Julie Mareschal *(1), Laurence Genton (1), Daniel Teta (2), Menno Pruijm (3), Catherine Stoermann (4), Nicola Marangon (1,5), Isabelle Bassi (2), Arelene Wurzner-Ghajarzadeh (2), Vladimir Lazarevic (6), Luc Cynober (7), Patrice D. Cani (8), François R. Herrmann (9) & Jacques Schrenzel (6)*

1-Unit of Clinical Nutrition, Geneva University Hospitals and University of Geneva, Geneva, Switzerland- 2-Service of Nephrology, Cantonal Hospital of Sion, Sion, Switzerland- 3-Service of Nephrology, University Hospital of Lausanne and University of Lausanne, Lausanne, Switzerland- 4-Service of Nephrology, Geneva University Hospitals and University of Geneva, Geneva, Switzerland- 5-Service of Nephrology, Geneva University Hospitals and Clinique of Champel, Geneva, Switzerland- 6-Genomic Research Lab and Service of Infectious Diseases, Geneva University Hospitals and University of Geneva, Geneva, Switzerland- 7-EA 4466, Faculty of Pharmacy, Paris University, and Clin Chem Lab, Cochin Hospital, Paris, France- 8-Louvain Drug Research Institute Metabolism and Nutrition Research Group, Walloon Excellence in Life Sciences and BIOtechnology (WELBIO), Université catholique de Louvain, Brussels, Belgium- 9-Department of Rehabilitation and Geriatrics, Geneva University Hospitals and University of Geneva, Geneva, Switzerland

Introduction: Protein energy wasting (PEW) is associated with negative outcome in chronic haemodialysis (HD) patients. We previously showed that overall faecal microbiota composition and function did not change with branched-chain amino acids (BCAA) or glycine supplementation in HD patients with PEW. This randomized double-blind crossover study assessed the impact of these amino acids on nutritional status, physical function, and quality of life.
Méthode: We included 36 chronic HD patients with PEW (albumin<38g/l or weight loss>5%; intake<30 kcal/kg/d and <1g protein/kg/d). Patients received either BCAA (2x7g/d) or glycine (2x7g/d) for 4 months, followed by a wash-out period of 1 month, and then the opposite supplement. The outcomes, obtained at the start and the end of each supplementation, were lean body mass measured by dual-energy X-ray absorptiometry, fat-free mass measured by bioelectrical impedance, resting energy expenditure, dietary intake, physical activity and function, and quality of life. Analyses were performed by multiple mixed linear regressions including type of supplementation, months, period, sex, and age as fixed effects and subjects as random intercepts.
Résultats: Twenty-seven patients (61.2±13.7 years, 41% women) completed the study. BCAA did not affect lean body mass index but significantly decreased fat-free mass index, as compared with glycine (coeff -0.27, 95%CI -0.43 to -0.10, p=0.002). BCAA and glycine had no effect on the other clinical parameters.
Conclusion: Unexpectedly, glycine improved fat-free mass in HD patients, as compared with BCAA. Whether long-term supplementation with glycine improves the clinical outcome remains to be demonstrated.

P20 - NON AFFICHE
RISK FACTORS FOR TREATMENT FAILURE IN WOMEN WITH UNCOMPLICATED LOWER URINARY TRACT INFECTION

Romain Martischang1*, Maciek Godycki-Ćwirko2, Anna Kowalczyk2, Katarzyna Kosiek3, Adi Turjeman4,5, Tanya Babich4,5, Shachaf Shiber6, Leonard Leibovici4,5, Elodie von Dach7,8, Stephan Harbarth1,7, Angela Huttner1,7*

1Infection Control Program and WHO Collaborating Centre on Patient Safety, University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland- 2Centre for Family and Community Medicine, Faculty of Health Sciences, the Medical University of Lodz, Lodz, Poland- 3Family Doctors ' Clinic Pomorska96, Lodz, Poland.- 4Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel- 5Department of Internal Medicine E, Rabin Medical Center, Beilinson Campus, Petah-Tiqva, Israel- 6Department of Emergency Medicine, Rabin Medical Center, Beilinson Campus, Petah-Tiqva, Israel- 7Division of Infectious Diseases, University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland
8Center for Clinical Research, University Hospitals of Geneva, Geneva, Switzerland

Introduction: Given rising antibiotic resistance and increasing use of delayed prescription for uncomplicated lower urinary tract infections (UTI), patients at risk for treatment failure should be identified early. We assessed risk factors for clinical and microbiological failure in women with lower UTI.
Méthode: This case-control study nested within a randomized clinical trial included all women in the per-protocol population (PPP), those in the PPP with microbiologically confirmed UTI, and those in the PPP with UTI due to Escherichia coli. Cases were women who experienced clinical and/or microbiologic failure; controls were those who did not. Risk factors for failure were assessed using multivariate logistic regression.
Résultats: In the PPP, there were 152 clinical cases for 307 controls. Among 340 women with microbiologically confirmed UTI, 126 and 102 cases with clinical and microbiological failure were considered with, respectively, 214 and 220 controls. Age ≥52 years was independently associated with clinical (adjusted OR 3.01; 95%CI 1.84-4.98) and microbiologic failure (aOR 2.55; 95%CI 1.54-4.25); treatment with fosfomycin was associated with clinical failure (aOR 2.35; 95%CI 1.47-3.80). The association with age persisted among all women, and women with E. coli-related UTI. Diabetes was not an independent risk factor.
Conclusion: Postmenopausal age emerged as an independent risk factor for both clinical and microbiological treatment failure in women with lower UTI and should be considered to define women at-risk for non-spontaneous remission, and thus for delayed antibiotic therapy; diabetes mellitus was not associated with failure.

P21

INCIDENCE OF COVID-19 IN PATIENTS TREATED WITH INFLIXIMAB COMPARED WITH PATIENTS TREATED WITH RITUXIMAB

Cathy Mireille Melong Pianta Taleng *, Kim Lauper , Benoit Gilbert, Tim Cunningham Romain Guemara, Laure Brulhart,, Diana Dan, Delphine Courvoisier, Axel Finckh*

Service de Rhumatologie, HUG

Introduction: Prevalence COVID-19 estimated to be 9,7% at the end of April in Geneva and patients with any immunosuppressive condition are at higher risk of developing severe forms of COVID-19 infection.We hypothesised that long-lasting, cell-depleting therapies may increase the risk of developing a severe COVID-19infection compared with targeted anticytokinic therapies, such as TNF inhibitors
Méthode: We included all patients who were on either RTX or infliximab (IFX) in two Swiss cantons during the first wave of the COVID-19 pandemic. We collected self-reported symptoms compatible with COVID-19, PCR-confirmed diagnoses of COVID-19 and the evolution of COVID-19 infections. We computed the raw and propensity score-adjusted incidence of COVID-19 by treatment group.
Résultats: 190 patients were enrolled, of whom 64% were in the RTX group and 36% were in the IFX group. 11% reported symptoms compatible with COVID-19. Four developed severe forms of the disease, that requiring intensive mechanical ventilation (RTX: 4 of 10, IFX: 0 of 11, Fisher's exact test p=0.04). The incidence rate of severe COVID-19 was 0.28 (95% CI 0.08 to 0.72) cases per 1000 patient-days on RTX compared with null on IFX (95% CI 0.0 to 0.44) (p=0.13). We confirmed these findings in the Independent validation cohort: SCQM
Conclusion: While the incidence of symptoms compatible with COVID-19 was overall similar in patients receiving RTX or IFX, the incidence of severe COVID-19 tended to be higher in the RTX group.

P22

REINTEGRATION SOCIALE SUITE A UNE CHIRURGIE RECONSTRUCTIVE EN AFRIQUE SUBSAHARIENNE

Lieke Metselaar*, Eva Cochard, Maïwenn Terrien, Leslie Rausis, Lionel Dumont*

Chirurgie plastique, reconstructive et esthétique, HUG

Introduction: La chirurgie reconstructive vise à rétablir l'intégrité d'une personne. En Afrique subsaharienne, il existe très peu de médecins spécialisés en chirurgie reconstructive. L'association 2nd Chance est une organisation à but non lucratif, dont la mission est de former des équipes chirurgicales. Elle effectue plusieurs missions par an en Tanzanie. Les patients opérés souffrent de brûlures, de traumatismes ou de maladies congénitales. L'objectif de cette étude est d'analyser l'impact de la chirurgie reconstructive sur la réinsertion sociale.
Méthode: Un questionnaire sur l'intégration sociale, la qualité de vie et les difficultés des activités quotidiennes a été établi pour la mission à Tumbi en octobre 2021. Ce questionnaire est composé de trois parties, rassemblant des informations démographiques, pré-opératoires et post-opératoires lors d'une seconde mission (4 mois plus tard). Nous avons été aidés par des traducteurs.
Résultats: 19 questionnaires complets ont été collectés. De plus, 17 nouveaux patients sont venus en octobre 2021 et seront revus lors des futures missions. 60% des patients avaient une vie compliquée avant l'opération. 83% se sentent différents et 95% ont mentionné un changement dans leur vie quotidienne après l'opération. 53% mentionnaient que la pathologie avait un impact sur la famille et 56% sur la vie dans la communauté. La chirurgie a permis un bon retour dans la communauté et la famille dans 100% des cas.
Conclusion: D'après ces résultats, la chirurgie a un impact positif sur la réintégration sociale. Cependant, l'étude est encore en cours pour avoir un plus grand échantillon.

P23

PRE-OPERATIVE IRON INCREASE HAEMOGLOBIN CONCENTRATION BEFORE ABDOMINAL SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

***Jeremy Meyer 1,2,3**, Roberto Cirocchi 4, Salomone Di Saverio 5, Frédéric Ris 2,3, James Wheeler 1 & Richard Justin Davies 1*

1 Colorectal Unit, Addenbrooke's Hospital, Cambridge NHS Foundation Trust, Cambridge, UK- 2 Division of Digestive Surgery, University Hospitals of Geneva, Geneva, Switzerland. 3 Medical School,- University of Geneva, Geneva, Switzerland- 4 University of Perugia, Perugia, Italy- 5 Hospital of San Benedetto del Tronto, Marche,Italy

Introduction: Professional surgical societies recommend the identification and treatment of pre-operative anaemia in patients scheduled for abdominal surgery. Our aim was to determine if pre-operative iron allows correction of haemoglobin concentration and decreased incidence of peri-operative blood transfusion in patients undergoing major abdominal surgery
Méthode: MEDLINE, Embase and CENTRAL were searched for RCTs written in English and assessing the effect of pre-operative iron on the incidence of perioperative allogeneic blood transfusion in patients undergoing major abdominal surgery. Pooled relative risk (RR), risk difference (RD) and mean difference (MD) were obtained using models with random effects. Heterogeneity was assessed using the Q-test and quantified using the I2 value.
Résultats: Four RCTs were retained for analysis out of 285 eligible articles. MD in haemoglobin concentration between patients with pre-operative iron and patients without pre-operative iron was of 0.81 g/dl (3 RCTs, 95% CI: 0.30 to 1.33, I2: 60%, p=0.002). Pre-operative iron did not lead to reduction in the incidence of peri-operative blood transfusion in terms of RD (4 RCTs, RD: -0.13, 95% CI: -0.27 to 0.01, I2: 65%, p=0.07) or RR (4 RCTs, RR: 0.57, 95% CI: 0.30 to 1.09, I2: 64%, p=0.09).
Conclusion: Pre-operative iron significantly increases haemoglobin concentration by 0.81 g/dl before abdominal surgery but does not reduce the need for peri-operative blood transfusion. Important heterogeneity exists between existing RCTs in terms of populations and interventions. Future trials should target patients suffering from iron-deficiency anaemia and assess the effect of intervention on anaemia-related complications.

P24

RELAXATION TIME OF BRAIN TISSUE IN THE ELDERLY ASSESSED BY SYNTHETIC MRI

***Martin Ndengera**, Bénédicte M. A. Delattre, Max Scheffler, Karl-Olof Lövblad, Torstein R. Meling, Maria Isabel Vargas*

Radiologie, HUG

Introduction: Background: Synthetic MRI (SyMRI) is a quantitative technique that allows measure-ments of T1 and T2 relaxation times (RTs). Brain RT evolution across lifespan is well described for the younger population. The aim was to study RTs of brain parenchyma in a healthy geriatric population in order to define the normal value of structures in this group population. Normal values for geriatric population could help find biomarker for age-related brain disease.
Méthode: Materials and methods: Fifty-four normal-functioning individuals (22 females, 32 males) with mean age of 83 years (range 56–98) underwent SyMRI. RT values in manu- ally defined ROIs (centrum semiovale, middle cerebellar peduncles, thalamus, and insu- lar cortex) and in segmented whole-brain components (brain parenchyma, gray matter, white matter, myelin, CSF, and stromal structures) were extracted from the SyMRI seg- mentation software. Patients' results were combined into the group age. Main ROI- based and whole-brain results were compared for the all dataset and for age group results as well.
Résultats: RTs between ROI-based analyses and whole-brain for T2 and for T1 were statistically different and a trend of increasing T1 in centrum semiovale and cerebellar peduncle was observed. Thalamic T1 was statistically different from insular T1. A difference was also found between left and right insula ($p < .0001$). T1 RTs of ROI-based and whole-brain-based analyses were statistically different ($p < .0001$). A statistical difference between age groups was found for myelin between 65–74 years of age and the 95–105 years of age groups ($p = .038$).
Conclusion: SyMRI is a new tool that allows faster imaging and permits to obtain quantitative T1 and T2. By defining RT values of different brain components of normal-functioning elderly individuals, this technique may be used as a biomarker for clinical disorders like dementia.

P25

DIAPHRAGM DYSFUNCTION AND PERIPHERAL MUSCLE WASTING IN SEPTIC SHOCK PATIENTS: EXPLORING THEIR RELATIONSHIP OVER TIME USING ULTRASOUND TECHNOLOGY (THE MUSISHOCK PROTOCOL)

***Ivo NETO SILVA**, José Alberto DUARTE, Aurélie PERRET, Nicolas DOUSSE, Hannah WOZNIAK, Bernardo BOLLEN PINTO, Raphaël GIRAUD, Karim BENDJELID*

Soins intensifs adultes, DMA - Anesthésie, DMA - HUG

Introduction: Intensive Care Unit (ICU) patients are known to lose muscle mass and function during ICU stay. Ultrasonography (US) application for the assessment of the skeletal muscle is a promising tool and might help detecting muscle changes and thus several dysfunctions during early stages of ICU stay. MUSiShock is a research project aiming to investigate structure and function of diaphragm and peripheral muscles using ultrasound techniques in septic shock patients, and to assess their relevance in several clinical outcomes such as the weaning process.
Méthode: This is a research protocol from an observational prospective cohort study. We plan to assess eighty-four septic shock patients during their ICU stay at the following time-points: at 24 hours of ICU admission, then daily until day 5, then weekly, at extubation time and at ICU discharge. At each time-point, we will measure the quadriceps rectus femoris and diaphragm muscles, using innovative US muscle markers such as Shear-Wave Elastography (SWE). The Medical Research Council sum score for muscle testing and the Airway occlusion pressure (P0.1) will also be collected.
Résultats: (Study protocol - no published results yet)
We will describe the association between SWE assessment and other US markers for each muscle. The association between the changes in both diaphragm and rectus femoris US markers over time will be explored as well; finally, the analysis of a combined model of one diaphragm US marker and one limb muscle US marker to predict weaning success/failure will be tested.
Conclusion: By using muscle ultrasound at both diaphragm and limb levels, MUSiShock aims to improve knowledge in the early detection of muscle dysfunction and weakness, and their relationship with muscle strength and MV weaning, in critically ill patients. A better anticipation of these short-term muscle structure and function outcomes may allow clinicians to rapidly implement measures to counteract it.

P26

SARS-COV2- INFECTION AS A TRIGGER OF HUMORAL RESPONSE AGAINST APOLIPOPROTEIN A-1

***Sabrina Pagano,** Sabine Yerly, Benjamin Meyer, Catherine Juillard,Noemie Suh, Cristophe Le Terrier, Jean-Philippe Daguer, Luc Farrera-Soler, Sophie Barluenga, Giovanni Pium atti, Oliver Hartley, Barbara Lemaitre, Christiane Eberhardt, Claire-Anne Siegrist, Isabella Eckerle, Silvia Stringhini, Idris Guessous, Laurent Kaiser, Jerome Pugin, Nicolas Winssinger.*

Département Diagnostique, Service Médecine de Laboratoire.
Département de Médecine.

Introduction: Unravelling autoimmune targets triggered by SARS-CoV-2 infection may provide crucial insights in the physiopathology of the disease and foster the development of potential therapeutic candidate targets and prognostic tools. We aimed at determining i) the association between anti-SARS-CoV-2 and anti-apoA-1 humoral response, and ii) the degree of linear homology between SARS-CoV-2, apoA-1, and Toll-like receptor-2 (TLR2) epitopes.
Méthode: Bio-informatics modelling coupled with mimic peptides engineering and competition experiments were used to assess epitopes sequence homologies. Anti-SARS-CoV-2 and anti-apoA-1 IgG as well as cytokines were assessed by immunoassays on a case-control (n=101), an intensive care unit (ICU; n=126), and a general population cohort (n=663) with available samples in the pre and post-pandemic period.
Résultats: Using bioinformatics modelling, linear sequence homologies between apoA-1, TLR2, and Spike epitopes were identified but without experimental evidence of cross-reactivity. Overall, anti-apoA-1 IgG levels were higher in COVID-19 patients or anti-SARS-CoV-2 seropositive individuals than in healthy donors or anti-SARS-CoV-2 seronegative individuals ($p<0.0001$). Significant and similar associations were noted between anti-apoA-1, anti-SARS-CoV-2 IgG, cytokines, and lipid profile. In ICU patients, anti-SARS-CoV-2 and anti-apoA-1 seroconversion rates displayed similar 7-days kinetics, reaching 82% for anti-apoA-1 seropositivity. In the general population, SARS-CoV-2-exposed individuals displayed higher anti-apoA-1 IgG seropositivity rates than non-exposed ones (34% vs 16.8%; $p=0.004$).
Conclusion: COVID-19 induces a marked humoral response against the major protein of high-density lipoproteins. As a correlate of poorer prognosis in other clinical settings, such autoimmunity signatures may relate to long-term COVID-19 prognosis assessment and warrant further scrutiny in the current COVID-19 pandemic.

P27

ASSOCIATIONS OF CALCIUM INTAKE AND CALCIUM FROM VARIOUS SOURCES WITH BLOOD LIPIDS IN A POPULATION OF OLDER WOMEN AND MEN WITH HIGH CALCIUM INTAKE

***Maria Papageorgiou**, Fanny Merminod, Serge Ferrari, René Rizzoli and Emmanuel Biver*

Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, University of Geneva, Switzerland

Introduction: Promoting calcium intake is a cornerstone for osteoporosis management. Some individuals limit dairy product consumption, a major calcium source, due to their high content of in saturated fats and their perceived negative impact on lipid profiles. This study explored the associations of calcium from various sources with blood lipids in community-dwelling elderly (n=717) from the Geneva Retirees Cohort (GERICO).
Méthode: Dietary calcium intake was assessed at several timepoints using a validated food frequency questionnaire (FFQ) and calcium supplement use was recorded. Blood lipids were treated as categorical variables to distinguish those with normal and abnormal levels.
Résultats: Increasing total calcium intake was associated with lower risks for high total cholesterol (P=0.038) and triglycerides (P=0.007), and low HDL-cholesterol (P=0.010). Dairy calcium (P=0.031), calcium from milk (P=0.044) and milk-based desserts (P=0.039), i.e., low-fat dairies (P=0.022), were associated with a lower risk of high total cholesterol. Calcium from total dairies (P=0.020) and milk (P=0.020) was inversely associated with hypertriglyceridemia. No significant association was observed with calcium from high-fat dairies. Calcium from supplements was associated with lower risks for hypertriglyceridemia (P=0.022) and low HDL-cholesterol (P=0.001), but not after adjustments.
Conclusion: Our results suggest that higher calcium intakes from dietary sources or supplements are not adversely associated with blood lipids in the elderly, whilst total, and particularly low-fat, dairy products are valuable calcium sources potentially related to favorable lipid profiles.

P28

PREVENTION DE L'ECZEMA PAR VACCINATION NEONATALE AVEC LE BCG: RESULTATS DE L'ETUDE RANDOMISEE CONTROLEE MIS BAIR

***Laure F Pittet**, Nicole L Messina, Kaya Gardiner, Bridget Freyne, Veronica Abruzzo, Kate L Francis, Clare Morrison, Christel Zufferey, Peter Vuillermin, Katrina J Allen, Anne-Louise Ponsonby, Roy Robins-Browne, Frank Shann, Katie L Flanagan, Rod Phillips, Susan Donath, Dan Casalaz, Nigel Curtis*

Service de Pédiatrie Générale, Département de la Femme, de l'Enfant et de l'Adolescent

Introduction: Le vaccin bacille Calmette-Guérin (BCG), initialement développé pour prévenir la tuberculose, pourrait jouer un rôle fondamental dans la prévention des maladies atopiques, via ses effets non-spécifiques. Dans cette étude, nous voulions évaluer si la vaccination néonatal par BCG pouvait réduire l'incidence de l'eczéma.
Méthode: Essai randomisé contrôlé sur un total de 1272 enfants randomisés à la naissance à recevoir ou non une dose de BCG-Denmark. L'incidence cumulative d'eczéma dans les 12 premiers mois de vie est calculée grâce à des questionnaires remplis par les parents tous les 3 mois. Les enfants étaient également examinés à 12 mois de vie pour déterminer de façon objective la présence d'eczéma. ClinicalTrial.gov: NCT01906853.
Résultats: L'incidence cumulative d'eczéma était de 32.2% dans le groupe BCG vs. 36.6% dans le groupe contrôle (différence de risque ajustée (aRD) −4.3%, IC95% −9.9% à 1.3%). Un eczéma actif était observé chez 15.7% du groupe BCG contre 19.2% du groupe contrôle (aRD −3.5%, IC95% −8.0% à 1.0%). Parmi les 344 enfants nés de deux parents atopiques, l'incidence cumulative d'eczéma était de 35.3% dans le groupe BCG et de 46.8% dans le groupe contrôle (aRD −11.5%, IC95% −21.9% à −1.2%) correspondant à 8.7 sujets à traiter pour prévenir 1 cas d'eczéma.
Conclusion: La vaccination néonatale par BCG-Denmark permet de réduire l'incidence de l'eczéma chez les enfants prédisposés (deux parents atopiques).

P29 – NON AFFICHE
UROMODULIN AND CHRONIC KIDNEY DISEASE: ASSESSING CAUSALITY USING MENDELIAN RANDOMIZATION

***Belen Ponte**, Marie C. Sadler, Eric Olinger, Peter Vollenweider, Murielle Bochud, Sandosh Padmanabhan, Caroline Hayward, Zoltan Kutalik, Olivier Devuyst*

Néphrologie et Hypertension – HUGE, Unisanté – Lausanne, Institut de Physiologie – Zurich, Médecine Interne – CHUV, Insitute of Cardiovascular and Medical Sciences - University of Glasgow (Scotland), MRC Human Genetics Unit - University of Edinburg (Scotland)

Introduction: UMOD risk variants associated with higher urinary levels of uromodulin (uUMOD), increase risk of CKD and hypertension. However, uUMOD also reflects functional kidney tubular mass in observational studies, the potential role of uromodulin production in kidney damage.
Méthode: We used Mendelian randomization (MR) to clarify causality between uUMOD levels, kidney function and blood pressure in individuals of European descent. The link between uUMOD and eGFR was first investigated in a population-based cohort (CoLaus, n=3'851). Then we applied two-sample MR on 4 meta-analyzed cohortsGWAS consortia including >1'335'000 individuals of European descent to explore causal links between uUMOD and eGFR, CKD risk (n~500k) and systolic blood pressure (SBP, n~750k).
Résultats: Higher levels of uUMOD associated with lower eGFR, higher odds for eGFR decline or CKD, and higher SBP or DBP. Per 1 SD increase of uUMOD, log-transformed eGFR decreased by -0.15 SD and log-odds CKD increased by 0.13 SD . Increase in 1SD of uUMOD increased SBP by 0.06 SD and DBP by 0.08 SD .The effect of uUMOD on BP was mediated by eGFR, but the effect on eGFR was not mediated by BP.
Conclusion: Our data support that genetically-driven levels of uromodulin have a direct, causal and adverse effect on kidney function outcome in the general population, not mediated by blood pressure.

P30
IMPACT ON HIV-1 RNA LEVELS AND ANTIBODY RESPONSES FOLLOWING SARS-COV-2 VACCINATION IN HIV-INFECTED INDIVIDUALS

***Vera Portillo**, **Chiara Fedeli**, Pilar Ustero Alonso, Ianis Petignat, Ellen Cristina Mereles Costa, Adi Sulstarova, Cyril Jaksic, Sabine Yerly and Alexandra Calmy*

1) Division of Infectious Diseases, Geneva University Hospitals, Geneva, Switzerland, - 2) Clinical Research Centre (CRC) & Division of Clinical Epidemiology, Department of Health and Community Medicine, University of Geneva and Geneva University Hospitals, Geneva, Switzerland- 3)Division of Laboratory Medicine, Geneva University Hospitals, and Centre for Emerging Viral Diseases and Laboratory of Virology, Geneva University Hospitals, Geneva, Switzerland- 4)Department of Medicine, Faculty of Medicine, University of Geneva, Geneva, Switzerland

Introduction: Past experience with two doses of AS03-adjuvanted influenza vaccine resulted in a strong serological response, but also in a transient effect on HIV-1 RNA levels in participants with a previously well-controlled infection. We aimed to assess the humoral response to the SARS-CoV-2 vaccine over 6 months in PLWH after two doses of vaccine. Secondary objectives were to measure the impact of the SARSCoV-2 vaccine on HIV-1 RNA levels at one and two months, followed by data recorded in the patient's file thereafter, and vaccine safety.
Méthode: Observational, open-label study in the Swiss HIV Cohort Study. Participants received two doses of SARS-CoV-2 mRNA vaccine 4 weeks apart. Recruitment: every individual fulfilling criteria and consenting to routine vaccination were eligible and asked to sign a written consent form. We collected blood samples at the time of the first (M0) and second (M1) dose of the vaccine, 30 days after the second dose (M2), and 6 months after the first dose (M6). We measured anti-SARS-CoV-2 S1-receptor-binding domain antibodies, anti-SARS-CoV-2 N total antibodies and HIV-1 RNA levels in PLWH.
Résultats: 1. For the healthy volunteers, GMT were 308.5 IU/ml at M1, 2815.6 IU/ml at M2, and 1896.5 IU/ml at M6. GMT values were statistically higher for the healthy volunteers at each time point. 2. We compared GMT for PLWH based on anti-N positivity at baseline and at each time point. GMT were consistently higher among those with a positive anti-N result at baseline. 3. Serological responses were not significantly different between participants with more or less than 20 HIV-1 RNA copies/ml.
Conclusion: PLWH on antiretroviral drugs elicited satisfactory anti-RBD antibodies titers up to 4 months after two doses of SARS-CoV- 2 mRNA vaccine with no safety concerns. While we observed detectable HIV-RNA values during the 6-month study period, only one participant presented an HIV-RNA value >200 copies 6 months after the first vaccine administration. Among PLWH routinely and regularly followed up in a specialized consultation in Switzerland, participants elicited a good anti-RBD antibodies response after the first two doses of mRNA vaccines, with only a minor impact on RNA-HIV-1 levels at most.

P31

SYSTEMIC INFLAMMATION AND WHITE MATTER MICROSTRUCTURAL CHANGES IN COVID-19 ENCEPHALOPATHY

***Alexandra Rhally**, Alessandra Griffa, Stéphane Kremer, Marjolaine Uginet, Gautier Breville, Patrick Stancu, Frédéric Assal, Patrice H. Lalive, Karl-Olof Lövblad, Gilles Allali*

Faculty of Medicine, University of Geneva, Geneva, Switzerland, Department of Clinical Neurosciences, Division of Neurology, Geneva University Hospitals and Faculty of Medicine, University of Geneva, Geneva, Switzerland, Institute of Bioengineering, Center of Neuroprosthetics, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, Service d'imagerie 2, Hôpitaux Universitaires de Strasbourg, Strasbourg, France, Engineering Science, Computer Science and Imaging Laboratory (ICube), Integrative Multimodal Imaging in Healthcare, UMR 7357, University of Strasbourg-CNRS, Strasbourg, France- Diagnostic Department, Division of Laboratory Medicine, Geneva University Hospitals, Geneva, Switzerland, Department of Pathology and Immunology, Faculty of Medicine, University of Geneva, Geneva, Switzerland, Division of Neuroradiology, Geneva University Hospitals and University of Geneva, Geneva, Switzerland, Department of Neurology, Division of Cognitive and Motor Aging, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY, USA

Introduction: SARS-CoV-2 infection can lead to various neurological complications, such as stroke or encephalopathy. COVID-19 acute encephalopathy has been defined as a rapidly developing brain pathological process leading to delirium, decreased level of consciousness or coma. An inflammatory etiology has been suggested due to the blood-brain barrier alterations.
The objective of this study was to investigate the link between cerebral microstructural changes in the white matter, measured by apparent diffusion coefficient (ADC) in diffusion-weighted imaging, and systemic inflammation.
Méthode: Twenty patients (mean age : 67.3 ± 10.0 years; sex : 18 men (90%)) with acute COVID-19 encephalopathy hospitalized during the first wave of the COVID-19 at the Geneva University Hospitals were included in this study.
The white matter microstructural changes were quantified with the average ADC value extracted in nine different regions that have been associated with delirium. Systemic inflammation was measured with C-reactive protein (CRP) blood levels.
Linear regression was used to evaluate the association between the average ADC and CRP levels, age was used as a covariate.
Résultats: Our results showed that higher CRP levels were significantly associated with increased ADC in the external capsule ($\beta = 0.61$, $t(15) = 2.97$, $p = 0.0068$), the anterior corona radiata ($\beta = 0.60$, $t(15) = 2.95$, $p = 0.0089$) and the genu of the corpus callosum ($\beta = 0.60$, $t(13) = 3.16$, $p = 0.0064$).
Conclusion: Systemic inflammation is associated with white matter microstructural changes in specific white matter tracts. Our results support the hypothesis of an inflammatory cause of COVID-19 encephalopathy.

P32

COMPRENDRE LE PHENOMENE DE FLEXION-RELAXATION CHEZ LES PATIENTS ATTEINTS DE LOMBALGIE CHRONIQUE NON-SPECIFIQUE GRACE A LA REALITE VIRTUELLE

***Kevin Rose-Dulcina**, Stephane Genevay, Stephane Armand*

Service de chirurgie orthopédique et traumatologie de l'appareil moteur, Service de Rhumatologie, HUG

Introduction: Le phénomène de flexion-relaxation (PFR), relâchement des muscles du dos en flexion maximale du tronc, est fréquemment absent chez les patients souffrant de lombalgie commune chronique (LCC). Cependant on ne sait pas si l'absence de FRP chez ses patients est due à un manque de flexion ou est intrinsèque à la pathologie. La réalité virtuelle immersive (RV) permet désynchronisé le mouvement de l'avatar du mouvement réel et donc augmenter/diminuer le mouvement du sujet. La RVI devrait permettre de discerner si l'absence de PFR est intrinsèque ou non à la LCC.
Méthode: Un environnement en RVI a été créé donnant l'illusion au sujet qu'il se voyait dans un miroir puis paramétré afin de créer 4 situations de décalage d'amplitude. Treize patients avec LCC et treize participants asymptomatiques (PA) appareillés en âge ont effectué des flexions maximales du tronc pendant que l'on enregistrait la cinématique du tronc (système optoélectronique) et l'électromyographie du muscle erector spinae longissimus afin de déterminer l'angle maximal et le ratio du PFR.
Résultats: En condition de RVI découplée, les sujets (PA et LCC) ont significativement augmenté leur angle de flexion. Chez les sujets LCC, l'augmentation de l'angle de flexion influence significativement le ratio du PFR.
Conclusion: Ces résultats indiquent que l'absence de PFR chez le sujet LCC ne semble pas être un phénomène intrinsèque mais plutôt le marqueur d'une diminution de l'amplitude de mouvement.

P33

ANTIPSYCHOTICS FOR NEGATIVE AND POSITIVE SYMPTOMS OF SCHIZOPHRENIA: DOSE-RESPONSE META-ANALYSIS OF RANDOMIZED CONTROLLED ACUTE PHASE TRIALS

Michel Sabe *1, Nan Zhao1, Alessio Crippa 2, Stefan Kaiser 1.*

1 Division of Adult Psychiatry, Department of Psychiatry, University Hospitals of Geneva
2 Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden

Introduction: La détermination de la dose cible antipsychotique optimale dans le traitement de la phase aiguë de la schizophrénie est d'une grande importance clinique. L'effet des antipsychotiques sur les symptômes négatifs doit être pris en compte car les patients continueront souvent le traitement reçu en phase aiguë.
Méthode: Nous avons mené une méta-analyse dose-réponse des symptômes négatifs et des symptômes positifs basée sur une revue systématique d'essais contrôlés randomisés (ECR) à dose fixe qui ont examiné l'efficacité des antipsychotiques pour le traitement des exacerbations aiguë de la schizophrénie. 40 ECRs ont inclus un total de 15689 patients.
Résultats: Les doses efficaces à 95% par jour pour les 13 antipsychotiques inclus et les 3 à longue durée d'action (LAI) étaient majoritairement différentes pour les symptômes négatifs et positifs: amisulpride (481mg, 690,6mg); aripiprazole (11,9mg, 11mg); asénapine (7,61mg, 5,66mg); brexpiprazole (2,1mg, 4mg); cariprazine (4mg, 6,51mg); halopéridol (6,34mg, 7,36mg); lurasidone (58,2mg, 86,3mg); olanzapine (15,5mg, 9,52mg); olanzapine LAI (15,7mg, 13,5mg); palipéridone (7,2mg, 7mg); palipéridone LAI (7,5mg, 5,9mg); quétiapine IR (264,2mg, 316,5mg); quétiapine ER (774mg, 707,2mg); rispéridone (7,5mg, 7,7mg); rispéridone LAI (5,13mg, 6,7mg); sertindole (13,5mg, 16,3mg); et ziprasidone (71,6mg, 152,6mg).
Conclusion: La forme des courbes dose-réponse variait selon les différents médicaments, la plupart des médicaments présentant un plateau à des doses plus élevées. La plupart des courbes dose-réponse suggèrent que les doses efficaces quasi maximales pourraient se situer dans la plage inférieure à moyenne de la dose autorisée. Des ECR supplémentaires sont nécessaires pour établir la dose optimale.

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ACUTE SYMPTOMATIC SEIZURES AND HIPPOCAMPAL SCLEROSIS: THE MAJOR CONTRIBUTOR FOR POST-STROKE EPILEPSY?

Dr. Patrick Stancu*, Dre. Pia De Stefano, Prof. Maria Vargas, Dr. Eric Menetre, Dr. Stefano Gallotto, Dr. Emmanuel Carrera, Prof. Andreas Kleinschmidt, Prof. Margitta Seeck*

Service de Neurologie, HUG

Introduction: Hippocampal sclerosis (HS) is a prominent biomarker of epilepsy. If acquired later in life, it usually occurs in the context of degenerative or acute inflammatory-infectious disease. Conversely, acute symptomatic seizures (ASS) are considered a risk factor for developing post-stroke epilepsy but other factors remain unrecognized. Here, we hypothesize that silent hippocampal injury contributes to the development of post-stroke epilepsy.
Méthode: We performed a retrospective observational study of patients hospitalized between 1/2007 and 12/2018 with an acute stroke in the Stroke Center of the Geneva University Hospital. Patients were included if they had a documented normal hippocampal complex at onset and a control MRI at ≥ 2 years interval without new lesion in the meantime.
Résultats: 163 patients fulfilled our inclusion criteria. ASS during the first week and epileptiform abnormalities in electroencephalography (EEG) were more frequently associated with the development of epilepsy ($p<0.0001$). Hemorrhagic stroke was also strongly associated with ASS and future focal epilepsy ($p= .00097$). Four patients (2.5%) developed hippocampal sclerosis ipsilateral to stroke and epilepsy after the cerebrovascular event . Three of them also had ASS and their stroke was hemorrhagic.
Conclusion: HS develops in a minority of patients after cerebrovascular lesions, probably as a result of ASS mostly in hemorrhagic stroke. It seems that HS developed as a consequence of these brain injuries, leading to focal epilepsy. Without follow-up MRI at a later time point, HS may be missed. Prospective studies are mandatory, including systematic follow-up MRI and EEG, to determine the frequency of HS, to identify acute predictors of HS (AAS, stroke type) and to assess its potential impact on stroke recovery.

P35
CHANGES OF LIPOPROTEIN(A) LEVELS WITH ENDOGENOUS STEROID HORMONES

***Elena Tessitore**, Kevin Dobretz, Nasser Abdalla Dhayat, Ilse Kern, Belen Ponte, Menno Pruijm, Daniel Ackermann, Sandrine Estoppey, Michel Burnier, Pierre-Yves Martin, Bruno Vogt, Nicolas Vuilleumier, Murielle Bochud, Francois Mach, Georg Ehret*

Service de Cardiologie, HUG

Introduction: Lipoprotein(a) [Lp(a)] is an LDL-like molecule that is likely causal for cardiovascular events and Lp(a) variability has been shown to be mostly of genetic origin. Exogenous hormones (hormone replacement therapy) seem to influence Lp(a) levels, but the impact of endogenous hormone levels on Lp(a) is still unknown. The aim of the study was to assess the effect of endogenous steroid hormone metabolites on Lp(a).
Méthode: Lipoprotein(a) levels were measured in 1,021 participants from the Swiss Kidney Project on Genes in Hypertension, a family-based, multicentre, population-based prospective cohort study. Endogenous levels of 28 steroid hormone precursors were measured in 24-h urine collections from 883 individuals. Of the participants with Lp(a) data, 1,011 participants had also genotypes available.
Résultats: The participants had an average age of 51 years and 53% were female. Median Lp(a) levels were 62 mg/L, and the 90th percentile was 616 mg/L. The prevalence of a Lp(a) elevation ≥700 mg/L was 3.2%. Forty-three per cent of Lp(a) variability was explained respectively by: age (2%, p < .001), LDL-C (1%, p = .001), and two SNPs (39%, p value<2·10-16). Of the 28 endogenous steroid hormones assessed, androstenetriol, androsterone, 16α-OH-DHEA and estriol were nominatively associated with serum Lp(a) levels in univariable analyses and explained 0.4%-1% of Lp(a) variability, but none of them reached significance in multivariable models.
Conclusion: In this contemporary population-based study, the prevalence of a Lp(a) elevation ≥700 mg/L was 3.2%. The effect of endogenous steroid hormone levels of Lp(a) variability was small at best, suggesting a negligible impact on the wide range of Lp(a) variability.

P35-A
SYMPTOMS AND QUALITY OF LIFE AT 1-YEAR FOLLOW UP OF PATIENTS DISCHARGED AFTER AN ACUTE COVID-19 EPISODE

***Elena Tessitore**, Sandra Handgraaf, Antoine Poncet, Maëlle Achard, Stefan Höfer, Sebastian Carballo, Christophe Marti, Cédric Follonier, François Girardin, François Mach, David Carballo*

Service de Cardiologie, HUG

Introduction: Patients surviving COVID-19 have been described as being at risk of developing sequelae. We aimed to investigate and elicit persistent symptoms, emotional status and quality-of-life in patients discharged after an acute COVID-19 episode.
Méthode: Patient-reported outcome measures were collected during a telephone interview 30 days and 1 year after discharge. Patients' general health status was evaluated using questions based on their symptoms, emotional status was assessed using the items 9 to 12 of the HeartQoL questionnaire and quality of life was assessed at 1 year through the EQ-5D-5L. In patients with a history of cardiovascular disease, all 14 items of the HeartQoL questionnaire were completed to derive the HeartQoL global score.
Résultats: Among 687 patients who survived after being hospitalised for COVID-19 at the University Hospitals of Geneva, 184 (27%) and 165 (24%), respectively, participated in the follow-up at 30 days and 1 year. Of these 184 participants, 62% were male, median age was 58 years and at one month after discharge, 61% (113/184) of patients presented fatigue and 28% (52/184) dyspnoea. One year after discharge, the main complaints were persistent fatigue in 27% (45/165) of patients, neurological problems in 17% (28/165) and dyspnoea in 14% (23/165).
Conclusion: Approximately half of patients reported some symptoms 1 year after discharge following an acute episode of COVID-19. The predominant symptom was persistent fatigue both at 1-month and at 1-year follow-up. Emotional status and quality of life appeared satisfactory.

P36

ANALYSE DE LA PRATIQUE PROFESSIONNELLE DANS LA PRATIQUE DES INFIRMIERES CLINICIENNES SPECIALISEES D'UN HOPITAL UNIVERSITAIRE SUISSE : UNE ANALYSE DE CONTENU

Mélanie Verdon *; Nathalie Bochaton ; Marie-José Roulin ; Alexandra Groz*

Direction des soins, HUG

Introduction : Les infirmières cliniciennes spécialisées (ICLS) mettent leur pratique experte au service des patients et de leurs proches, des équipes, et de leur institution. Le rôle des ICLS dans le développement des pratiques basées sur des résultats probants est souvent mis en avant, en contribuant au transfert des nouvelles connaissances dans la pratique. De plus, les ICLS des HUG sont régulièrement sollicitées par les cadres de santé pour réaliser de l'analyse de la pratique professionnelle (APP) auprès des équipes soignantes, pourtant ce rôle n'est que très peu décrit dans la littérature sur les ICLS.
Objectif : Explorer comment s'inscrit l'analyse de la pratique professionnelle dans la pratique des infirmières cliniciennes spécialisées comme dispositif d'accompagnement des équipes soignantes et de développement des savoirs.
Méthode : Etude qualitative exploratoire descriptive dont les données ont été recueillies lors d'un entretien de groupe auprès de neuf infirmières cliniciennes spécialisées et lors d'entretiens individuels auprès de quatre experts. Une analyse de contenu déductive a été utilisée pour catégoriser les données.
Résultats : Les entretiens révèlent que l'APP permet d'accompagner les équipes soignantes face à la complexité des soins. Cependant, cette pratique reste méconnue et confuse auprès des équipes soignantes et des cadres de santé.
Conclusion : L'APP permet le développement des connaissances personnelles et professionnelles, et contribue ainsi au développement des savoirs des infirmières. De par leur expertise, les infirmières cliniciennes spécialisées peuvent promouvoir la posture réflexive nécessaire à cette pratique.

P37

PEDIATRIC ONCOLOGISTS' PERSPECTIVES ON THE USE OF COMPLEMENTARY MEDICINE IN PEDIATRIC CANCER PATIENTS IN SWITZERLAND: A NATIONAL SURVEY-BASED CROSS-SECTIONAL STUDY

Léopold Pirson1,2,3, Sonja C Lüer4, Manuel Diezi5, Sabine Kroiss6, Pierluigi Brazzola7, Freimut H Schilling8, Nicolas von der Weid9, Katrin Scheinemann10,11, Jeanette Greiner12, Tycho Jan Zuzak13, ***Andre O. von Bueren1,2***

1 Department of Pediatrics, Gynecology, and Obstetrics, Division of Pediatric Hematology and Oncology, University Hospital of Geneva, Geneva, Switzerland. 2 Cansearch Research platform for pediatric oncology and hematology, Faculty of Medicine, Department of Pediatrics, Gynecology and Obstetrics, University of Geneva, Geneva, Swit-zerland 3 Department of Pediatrics, Cliniques Universitaires Saint-Luc, Brussels, Belgium. 4 Department of Pediatrics, Division of Pediatric Hematology and Oncology, University Children's Hospital, University Cancer Center, Inselspital, Bern, Switzerland. 5 Department of Pediatrics, Division of Pediatric Hematology and Oncology, Lausanne University Hospital, Lausanne, Switzerland. 6 Department of Pediatrics, Division of Pediatric Hematology and Oncology, Children's Hospital Zurich, Zurich, Switzerland. 7 Department of Pediatrics, Istituto Pediatrico della Svizzera Italiana, Bellinzona, Switzerland. 8 Department of Pediatrics, Division of Pediatric Hematology and Oncology, Children's Hospital Lucerne, Lucerne, Switzerland. 9 Department of Pediatrics, Division of Pediatric Hematology and Oncology, University Children's Hospital of Basel, Basel, Switzerland. 10 Department of Pediatrics, Division of Pediatric Hematology and Oncology, Cantonal Hospital Aarau, Aarau, Switzerland. 11 Department of Pediatrics, McMaster University Hamilton, Hamilton, ON, Canada. 12 Department of Pediatrics, Division of Pediatric Hematology and Oncology, Children's Hospital of Eastern Switzerland, St. Gallen, Switzerland. 13 Department of Pediatric and Adolescent Medicine, Gemeinschaftskrankenhaus Herdecke, Herdecke, Germany.

Introduction: There is a widespread use of complementary therapies among pediatric cancer patients. Previous studies provided evidence that communication between pediatric oncologists (POs) and patients/families about the use of these therapies is often incomplete. Furthermore, nationwide studies on this topic are rare. We assessed POs' perspectives on the use of complementary medicine (CM) in Switzerland.
Méthode: A link to an online survey was sent by e-mail to pediatric oncologists in all nine Swiss Pediatric Oncology Group centers. Eligible respondents were board-certified (Switzerland or abroad) POs currently working at a SPOG center.
Résultats: Overall response rate was 56%. Most POs (59%) indicated that they ask more than 50% of their patients about CM use. Frequent reasons for not asking were forgetting to ask (55%), lack of knowledge (31%), and lack of time (24%). More than every second PO (55%) reported having a lack of knowledge on the subject. Most POs (66 to 76%) indicated interest in learning more about specific CM topics. More information and specific training opportunities on the use of CM was deemed important by 76% to 97% of POs.
Conclusion: POs working in Switzerland identify complementary therapies as an important subject and are willing to acquire more knowledge on CM. More training seems to be necessary in order to increase awareness about the topic, to enhance communication about complementary therapies and thus to improve patient care.