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First prospective multicentric registry on malignant hypertension: Rational, design and early results from 100 patients of the french HAMA cohort

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Malignant hypertension (MHT) still exists, leading young people to a poor prognosis. Yet, we lack clear guidelines, mainly because data are scarce. We initiated the first MHT multicentric network to assess these issues. We built a 28 centers network so far, aiming for 40–50 French centers end 2020, and European participation in 2021. We prospectively recruit patients with severe hypertension (> 180/110) and severe hypertensive retinopathy (common definition) or 3-target organ damage among heart, kidney, brain and thrombotic microangiopathy (MOD HTN definition). We hope to recruit 500 patients in 5 years, with a 5 years follow up. We currently collect clinical and examination data, aiming for building a biobank and a target organ damage corelab to entirely reconsider the disease. During the first 6 months, we recruited as planned 58 patients, 41% were male, 49.1 ± 15 years old. Half of them were not known hypertensive, and one third presented a secondary hypertension. Non-observance was reported in 25% of patients as a trigger. Mean blood pressure was 219 ± 29/119 ± 20 mmHg. Patient care pathway was very different according to initial symptoms, target organ damage and centers: hypertension, neurology, nephrology, cardiology, internal medicine, intensive care unit and emergency department. Target organ damage was respectively 70%, 33%, 25% and 25% for kidney, heart, brain and thrombotic microangiopathy, mostly improving during follow up. Most of patients (70%) benefited from intravenous antihypertensive treatment and saline infusion. Length of stay was on average 8 days. Malignant Hypertension clearly didn’t disappear, but was diluted between the different specialties and forgotten. This most severe presentation has to be considered once again to rediscover the disease.

Disclosure of interest The authors declare that they have no competing interest.

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Venous thromboembolism frequency in patients hospitalized for SARS-CoV-2 infection

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Introduction Coronavirus disease 2019 (COVID-19) use Angiotensin-Converting Enzyme 2 (ACE-2) as a viral gateway and could have interactions with the RAA system. Other studies have found kalemia abnormalities associated with severe forms of COVID-19. Our goal was to assess the prognosis value of kalemia in severe COVID-19 hospitalized population.

Methods We analyzed data from a monocentric prospective observational cohort that included 65 patients PCR-confirmed positive for COVID-19 who were admitted at HEGP in Paris, between 15 to 21 March, 2020. The study aimed to determine the relationship between baseline kalemia and the primary composite outcome defined as admission to an intensive care unit (ICU) or death. Baseline kalemia was defined as the presence of a kalemia under 3.8 mmol/L within 10 days of the first symptom onset.
Results We included 65 patients with PCR COVID-19 positive test. Median age was 65 years old and 66.2% were male. Baseline kalemia under 3.8 mmol/L occurred in 31 patients (48%) including 11 patients (35.5%) who were hospitalized in ICU and 1 patient (3.2%) who died before ICU admission. In the primary end-point analysis based on multiple imputations for missing data, the adjusted hazard ratios for admission to ICU or death were 3.52 [95% CI, 1.12 to 11.04] among patients who presented a kalemia under 3.8 mmol/L with 10 days of the first symptom onset. Moreover, we did find an adjusted association between baseline kalemia and the minimum hemoglobin level presented by the patients during the hospital stay (odds ratio, 0.80; 95% CI, 0.64 to 0.99) (Fig. 1).

Conclusion Our study suggests that the presence of a kalemia under 3.8 mmol/L within 10 days of the first symptom onset might be associated with an increased risk of intensive care unit or death, and the minimum hemoglobin level presented by the patients during the hospital stay. Future intervention studies aimed for correcting this hypokalemia with ARBs to improve prognosis are ongoing.

Figure 1 – Cumulative incidence of ICU hospitalization or death among COVID-19 patients

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099 What are the real prevalence of hypertension in France?
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Background/Introduction Multiple loud pressure (BP) measurements during several visits are recommended for diagnosis of hypertension. However, in epidemiological studies, BP is frequently measured during a single visit. It has been widely described that the prevalence of hypertension based on BP measurement at a single visit is overestimated because of the regression to the mean phenomenon.

Purpose The aim of our study was to give an unbiased estimate of the hypertension prevalence in France.

Methods Esteban was a cross-sectional survey implemented in 2015 based on a random sample of the French population. Three standardized BP measurements were performed during a clinical exam. Hypertension was defined as BP ≥ 140/90 mmHg or hypertensive treatment. After correcting BP to account for the within-person variability (estimated from other studies with repeated visits), we estimated the prevalence of hypertension and the proportions of treated and controlled hypertensives and the number of hypertensives in France.

Results The prevalence estimates of hypertension from the Esteban study decreased from 30.6% using observed data to 22.6% after correction with the BP variability. The proportion of drug-treated hypertensive patients increased from 48.9 to 67.8% and the proportion of controlled BP among treated patients from 49.6% to 52.1%, before and after correction respectively. By applying these corrected proportions to the French adult population by sex and age categories, the number of hypertensive patients reached 13,000,000, of which 9,000,000 were treated.

Conclusion Using estimation of the within-person variability from other studies, the new prevalence of hypertension in the French adult population would be around 22.6% (13 million people) after correction. Taking into account BP variability could avoid a substantial over-estimation of the prevalence of hypertension at the population level.

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135 Pregnancy after ascending aorta surgery in women with Marfan syndrome
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Introduction Prophylactic surgery of the ascending aorta to prevent the risk of type A aortic dissection is recommended prior to pregnancy in women with Marfan syndrome (MFS) and FBN1 mutation when the aortic diameter is greater than 45 mm or earlier in related syndromes.

Purpose To assess the risk of aortic dissection in pregnancy after replacement of the ascending aorta in this population.

Method Our study consists of a retrospective analysis of data collected at the national reference centre for Marfan and related syndromes, concerning women with MFS or related syndromes who have undergone prophylactic ascending aorta surgery before the age of 45 years and who have had at least one full-term pregnancy. The primary endpoint was the occurrence of aortic dissection in the peripartum period.

Results In our cohort, 23 women with MFS according to the modified Gent criteria and genetically confirmed have a history of prophylactic aortic surgery followed by pregnancy. In total, there were 49 pregnancies: 35 postoperative and 31 full term. Two postpartum aortic dissections occurred:
— one type A on day 3 in a patient with a SMAD3 mutation (dissection of the distal segment of ascending aorta),
— one type B at day 46 in a patient with an FBN1 mutation who died following descending aortic replacement surgery 1.5 years later.

No aortic dissection was observed in pre-surgical pregnancies.

Conclusion Women with Marfan syndrome or related conditions who have had prophylactic ascending aortic replacement can...