The newsletter of the 37 Specialized Centers of Obesity in France

COVID special issue - March 2020

BRIEF OF CSO

1st COVID special issue 19

Page 1

Editorial

Dear CSO friends ,

Intuition or observation, people with particularly severe obesity would be numerous in services that deal with severe forms of COVID 19. Fear or reality? The current situation challenges us at all levels of the care chain, prevention included. We must react collectively. You will find below 4 methods of action.

Since the Obesity Plan and the creation of the GCC, the CSO teams, administrative coordinators, doctors and paramedics have shown tremendous responsiveness. The FORCE network brings us the methodological support essential for any action. Let's keep fake news! The scientists and AFERO clinicians support us to better understand the specifics as quickly as possible of this pandemic.

1) Scientific / bibliographic monitoring

Some of you have already shared good ideas, comments, analyzes with us. Get organized to make the most of it! FORCE and the GCC asked Judith Aron-Wisnewsky to collect published data and synthesize it. All volunteers are welcome.

The goal is to feed the CSO Newsletter (see Thibaut Batisse and the COM group of CSOs) and the site AFERO. Each contributor will sign their "mini literature review" (see below).

2) A "data collection" action / research by FORCE

We need epidemiological data. With Sébastien Czernichow, Martine Laville, Maud Alligier and many others, set up a data collection strategy in resuscitation, testing or care services...

3) Feedback

Tell us what you think can feed collective thinking or adapt our practices from prevention to care.

AFERO position and recommendations

The AFERO board of directors will be informed on a day-to-day basis of data thus collected. It is it is his job to synthesize it in the form of Position Papers and / or Recommendations.

His first recommendations for professionals go released on Monday March 23, 2020.

We need cohesion for this general mobilization! We owe it to our patients and to the entire population. The Obesity Roadmap asks us to develop and animate the Obesity. It's time to act with rigor and discernment by getting the key messages across to our partners in levels 1 and 2 of the gradation of care, without forgetting the patient associations.

Thanks everyone!

Muriel Coupaye for AFERO

Martine Laville for FORCE

Olivier Ziegler for the GCC and the Obesity Roadmap

The newsletter of the 37 Specialized Centers of Obesity in France

COVID special issue - March 2020

FORCE NETWORK

Joint observation and data collection

Faced with this unprecedented health crisis, the coordination of the FORCE network stresses the importance collect nationwide (where possible) harmonized patient data diagnosed COVID + through a common observation.

Among these data collected, we find all the pathologies * currently known having have been associated with over-risks. **Given the links observed but not yet demonstrated to this stage, between COVID and obesity, it seems essential to also include characteristics specific to obesity such as:**

- BMI> 30

- Weight

- Cut

- Significant weight loss> 10%

- History of bariatric surgery

- Signs of undernutrition

* As a reminder, the pathologies associated with an over-risk listed by the Ministry of Health which should also be present in the COVID + observations of your teaching hospitals:

- Chronic Respiratory Insufficiency (under O2 / or not)

- NYHA III or IV heart failure

- Insulin-treated diabetes or with secondary complications

- Pregnancy

- Cirrhosis> stage B

- Chronic kidney disease (dialysis / or not)

- Cancer

- Immunosuppression

- Medication (antiK chemo, biotherapy and / or corticotherapy for immunosuppressive purposes)

- Uncontrolled HIV infection or CDA <200

- Solid organ transplant or hematopoietic stem ...

- As well as the treatments

- NSAIDs

- Corticosteroid

- Immunomodulators

- Chemotherapy

Systematic collection of this information (even if it is declared data) will allow to see the influence of these pathologies, including obesity on the evolution of patients.

So, thank you in advance to all, if you have the possibility, to integrate within the observation COVID + implemented in your CHU the specific characteristics of obesity listed above.

Coordination of the FORCE network

Contact: Maud Alligier; maud.alligier@chu-lyon.fr

COVID special issue - March 2020

COVID-19 and OBESITY

Dr Judith Aron-Wisnewsky

1. Is obesity a risk factor for COVID-19 infection?

There is little international data on obesity and covid 19. Furthermore, if we look at the Chinese data it should be remembered that the BMI thresholds of Caucasian patients between 25 and 30kg / m² correspond to BMI thresholds for Chinese patients between 22.5 and 25.9 kg m² in men and 22.8 and 26.6 kg m² in women after taking into account total adiposity and distribution of fat 1 . However, there are data on the risks for obese people infection with other respiratory viruses. **See also point 2.**

2. Is there a risk threshold for BMI?

Not really; the threshold of 40 was proposed by the High Council of Public Health (HCSP) by analogy to other respiratory infections, but there is no data in the specific literature to covid

19. Nevertheless, a 2018 study carried out in Mexico on the risks of hospitalization (taken as a severity marker) for patients with viral respiratory diseases has shown that obese patients (BMI> 30 kg / m²) have an additional risk (OR = 3.18) and that this risk increases again in obese class 3 patients (OR = 18) 2 . This study also assessed risk factors (FDR) for infections with other viruses (including corona), and again shows that patients obese class 3 are at increased risk (OR = 2.78). Finally, the presence of other chronic pathologies also represented a hospital FDR (including COPD, asthma, type 2 diabetes and pathology cardiovascular).

3. What are the aggravating factors?

The HCSP issues recommendations for the prevention and management of COVID-19 in patients at risk of severe forms (https://www.hcsp.fr/Explore.cgi/avisrapportsdomaine? clefr = 775)

- people aged 70 and over;

- patients with a cardiovascular history: complicated hypertension, accident cerebrovascular or coronary artery disease, heart surgery, stage heart failure

NYHA III or IV;

- insulin-dependent diabetics who are unbalanced or have complications secondary to their pathology;

- people with chronic respiratory pathology likely to decompensate during a viral infection;

- patients with chronic kidney disease on dialysis and patients with cancer under treatment.

Despite the absence of data in the literature, due to an assumed risk given

data available on other respiratory infections are also considered

risk:

- people with congenital or acquired immunosuppression, medication

- patients with cirrhosis at stage B of the Child-Pugh classification at least

- **people with morbid obesity (body mass index> 40 kg / m 2**)

by analogy with influenza A (H1N1) 09.

COVID special issue - March 2020

- 3.1 obesity-hypoventilation syndrome and other causes of respiratory failure?

Chronic pulmonary diseases are FDRs of severity and death (see next paragraph). The most frequently cited is COPD; otherwise the articles mention a "chronic disease

pulmonary unspecified "(see 3.6).

- 3.2 heart disease

A Chinese retrospective study 3 carried out in 112 patients with cardiovascular disease has separated patients into two groups: critical and stable. Factors associated with being in a critical condition were lower lymphocyte levels, higher CRP and PCT. So interesting, patients with higher BMIs were more at risk: in this population

Chinese 3 , the BMI in the critical group was higher (25.5 vs. 22 kg / m²), which corresponds to overweight thresholds in China 1 . Overweight therefore seems to be a risk factor for severity in patient population with CVD. A BMI> 25 kg / m² was also associated with the risk of mortality 3 .

-3.3 significant recent weight loss (ex: post bariatric surgery)?

There is little data on recent weight loss but patients who have developed ARDS (acute respiratory decompensation syndrome) are more malnourished than those who do not have one developed (significantly lower prealbumin, albumin and total protein) 4 . Albumin lower is also a factor of mortality in another study 5 .

- 3.4 Comorbidities frequently present in the patient suffering from obesity

The patients who died in China from the covid had all developed ARDS. Patients who have developed ARDS more often have comorbidities (**hypertension or diabetes**), but also **abnormalities kidney or liver function** (ASAT, ALAT, Bili higher), as well as inflammation increased (IL-6, ferritin), and increased **D-Dimers** 4 . However, these factors associated with greater morbidity (ARDS) is not associated with mortality. The only parameters associated with the mortality are increased D-dimers and inflammation (IL-6) 4 . Another study confirms that patients with D-Dimers> 1 µg / mL on admission have an OR of death of 18 5 .

In addition, this publication emphasizes the risk of mortality in patients with previous comorbidities (**T2D, hypertension, coronary artery disease, COPD, chronic kidney disease including chronic renal failure**), as well as **malnourished patients (** albumin <30 g / l) and those with increased inflammatory syndrome (IL-6, ferritin) 5 .

Another study confirms that the risk factors associated with being hospitalized resuscitation in case of covid 19 infection are old age, cardiovascular disease and diabetes. Furthermore, this study confirms that the elevation of D-dimers is a risk factor 6 .

Another study evaluated the FDR of death in covid + patients hospitalized in intensive care and

also find the presence of comorbidities (T2D, CVD diseases, chronic diseases pulmonary, stroke) 7 .

4. The risk of complications, such as mortality in intensive care or decompensation respiratory, is it increased for obese people?

There is little data on covid 19. We can find answers for others viral infectious respiratory pathologies. For the H1N1 flu in 2009, obesity is one of the factors associated with the severity of the clinical condition of patients hospitalized in intensive care but not a risk factor for mortality in a Mexican series 8 . Confirmed results in a series Canadian 9 and in a Spanish series 10 . This is to be balanced by an American series or obesity also represented a severity factor (risk multiplied by 15 for BMI> 40 kg / m² and by 1.5 between 30 and 39.9 kg / m²). The risk of mortality in this series has not been calculated since all the 11 deceased patients were obese (8 dead out of 42 patients included).

Page 5

References :

1.

He, W. *et al.* Lower BMI cutoffs to define overweight and obesity in China. *Obesity (Silver Spring)* **23** , 684–691 (2015).

2.

Moser, J.-AS *et al.* Underweight, overweight, and obesity as independent risk factors for hospitalization in adults and children from influenza and other respiratory viruses. *Influenza Other*

Respir Viruses **13** , 3–9 (2019).

3.

Peng, YD *et al.* [Clinical characteristics and outcomes of 112 cardiovascular disease patients infected by 2019-nCoV]. *Zhonghua Xin Xue Guan Bing Za Zhi* **48** , E004 (2020).

4.

Wu, C. *et al.* Risk Factors Associated With Acute Respiratory Distress Syndrome and Death in Patients With Coronavirus Disease 2019 Pneumonia in Wuhan, China. *JAMA Intern Med* (2020) doi: 10.1001 / jamainternmed.2020.0994.

5.

Zhou, F. *et al.* Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet* (2020) doi: 10.1016 / S0140-6736 (20) 30566-3.

6.

Wang, D. *et al.* Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA* (2020) doi: 10.1001 / jama.2020.1585.

7.

Yang, X. *et al.* Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *Lancet Respir Med*

(2020) doi: 10.1016 / S2213-2600 (20) 30079-5.

8.

Domínguez-Cherit, G. *et al.* Critically Ill patients with 2009 influenza A (H1N1) in Mexico. *JAMA*

302 , 1880-1887 (2009).

9.

Kumar, A. *et al.* Critically ill patients with 2009 influenza A (H1N1) infection in Canada. *JAMA*

302 , 1872–1879 (2009).

10. Rello, J. *et al.* Intensive care adult patients with severe respiratory failure caused by
Influenza

A (H1N1) v in Spain. *Crit Care* **13** , R148 (2009).

11. Miller, RR *et al.* Clinical findings and demographic factors associated with ICU admission in

Utah due to novel 2009 influenza A (H1N1) infection. *Chest* **137** , 752–758 (2010)