CONCLUSÕES: Nesta população, o IAH foi inferior nos doentes sob metformina mas sem significância estatística, não obstante terem apresentado valores superiores de HbA1c. A maior prevalência de mulheres neste grupo constitui um viés à interpretação destes resultados. Estes sugerem que a metformina pode ter um papel protetor na SAOS para além do controlo glicémico, ainda que a reduzida dimensão da amostra seja uma limitação ao presente estudo.

PO4. CHARACTERIZATION OF CIRCULATING IMMUNE CELLS IN SUBJECTS UNDERGOING BARIATRIC SURGERY

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BACKGROUND: Obesity is commonly associated with chronic low-grade inflammation, an underlying hallmark of insulin resistance (IR) and in turn type 2 diabetes development.

OBJECTIVE: Phenotypical characterization of circulating immune cells from people with obesity (Ob).

METHODOLOGY: Peripheral blood was collected from Ob participants undergoing bariatric surgery (n=32: 22 female, 10 male; age: 45±12 years) and gender- and age-matched non-obese (NOb; n=9) subjects, at CHUC. The Ob group was further divided into ObIR (n=28) and insulin-sensitive ObIS (n=4).

RESULTS: Leukocytes were increased in the Ob (8±2 cells/mm^3) *vs*. NOb (6±1 cells/mm^3; p<0.05). Similarly, ObIR showed higher leukocyte counts (8±2 cells/mm^3) *vs*. ObIS (6±2 cells/mm^3; p<0.05). Furthermore, the percentage of neutrophils was increased in Ob (61±8%) *vs*. NOb (46±8%; p<0.05), while the percentage of lymphocytes and T-cells were diminished in Ob (26±7% and 18±6%, respectively) *vs*. NOb (38±6% and 26±7%, respectively; p<0.05). The percentage of CD4$^+$ T-cells was slightly increased in Ob (65±12%) *vs*. NOb (56±8%; p=0.07), whereas CD8$^+$ T-cells were diminished in Ob (29±11%) vs. NOb (38±9%; p=0.06). Furthermore, the Ob group shows higher percentage of Th17 (16±5%) *vs*. the NOb (11±4%; p<0.05), despite similar percentage of Th1 among CD4$^+$ T-cells. Moreover, a slight decrease was observed in CD4$^+$ Treg (within CD4$^+$ T-cells) in Ob (5.8±1.4%) *vs*. NOb (6.8±1.8%, p=0.08). In contrast, a higher percentage in CD8$^+$ Treg (within CD8$^+$ T-cells) was observed in the Ob (0.26±0.25%) *vs*. the NOb (0.09±0.05%; p<0.05). Though no differences were found in the percentage CD4$^+$ Treg, the CD196$^+$ Tregs were decreased in ObIR (18±10%) *vs*. ObIS (25±5%; p<0.05). Conversely, higher absolute numbers of CD195$^+$ Tregs were observed in ObIR (0.003±0.002 cells/mm^3) *vs.* ObIS (0.002±0.001 cells/mm^3; p<0.05). Interestingly, TIM-3 expression by CD4$^+$CD196$^+$ Tregs was increased in the ObIR group (2.2±1.4%) *vs.* ObIS (1.1±0.6%, p<0.05).

CONCLUSIONS: Important immune phenotypic differences were found in circulating immune cells from Ob *vs*. NOb participants, particularly in specific T-cell subsets. Furthermore, insulin-resistance may impact Treg immunosuppressive phenotype.

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PO5. COVID-19 LOCKDOWN AND IMPACT ON 2-YEAR WEIGHT LOSS IN A BARIATRIC SURGERY CENTRE

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INTRODUCTION: We have previously evaluated the impact of Covid-19 lockdown on short-term weight loss and found no significant difference, leading to the conclusion that the beneficial metabolic effects of surgery likely outweigh restrictions imposed by Covid-19 lockdown in the first year post-surgery. Maximum weight loss has been reported to occur between 18 and 24 months postoperatively, followed by an increased risk of weight regain thereafter. The aim of this study was to evaluate the effect of Covid-19 lockdown on weight loss tendency at 2-years post-bariatric surgery.

METHODOLOGY: Observational study comparing weight loss at 6, 12 and 24 months postoperatively between a group of patients submitted to bariatric surgery from January to March 2020 and a control group submitted to surgery at the same time period in 2017. Percentage of total weight loss (% TWL) and excess weight loss (% EWL) were assessed.

RESULTS: A total number of 203 patients were included, 101 patients had surgery in 2020 and 102 in 2017. Patients in 2020 were older and hypertension was more frequent. Yet again, no significant difference was found in weight loss between the 2017 and 2020 groups reported as % TWL (mean 27.08±7.530 *vs*. 28.03±7.074, 33.87±8.507 *vs*. 34.07±8.979 and 34.13±9.340 *vs*. 33.98±9.993; p=0.371) and % EWL (mean 66.83±23.004 *vs*. 69.71±17.021, 83.37±24.059 *vs*. 84.51±21.640 and 83.47±24.130 *vs*. 84.27±23.651; p=0.506) at 6, 12 and 24 months post-surgery, respectively.

CONCLUSIONS: Despite social restrictions imposed by Covid-19 lockdown, there was no significant difference between weight loss at 2-years post-operatively in the 2017 and 2020 group. These results show that later (>18 months) outcomes of bariatric surgery during Covid-19 were comparable with those before the pandemic, supporting the efficacy of bariatric procedures' metabolic effects during the first two years after surgery, regardless of lifestyle habits.

PO6. EFEITO DE DIFERENTES TIPOS DE CIRURGIA BARIÁTRICA NO PERFIL LIPÍDICO DE DOENTES COM OBESIDADE

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