

**68705 DISTURBANCES IN GLUCOSE METABOLISM IN PATIENTS WITH IRON OVERLOAD SYNDROME**Tadeu Gonçalves de Lima<sup>1</sup>, Fernanda Luna Neri Benevides<sup>2</sup>, Ana Angélica Lustosa Biffencourt de Araújo<sup>3</sup>, Herivaldo Ferreira da Silva<sup>3</sup>, Ana Rosa Pinto Quidute<sup>4</sup><sup>1</sup> Universidade Federal do Ceará (UFC), Universidade de Fortaleza (Unifor), Hospital Universitário Walter Cantídio (HUWC). <sup>2</sup> Centro de Hematologia e Hemoterapia do Ceará (Hemoce). <sup>3</sup> UFC, HUWC, Hemoce. <sup>4</sup> Departamento de Fisiologia e Farmacologia da UFC, HUWC, Núcleo de Pesquisa e Desenvolvimento de Medicamentos (NPDM) da UFC

**Introduction:** Iron overload syndrome (IOS) encompasses a broad spectrum of etiologies leading to an increase in the amount of iron in the tissues. The first reports were of advanced disease with hepatic, endocrine and cardiac dysfunction, besides the deposition of iron in the skin, with hyperpigmentation, giving the disease the nickname of “bronze diabetes”. **Objective:** To assess the prevalence of pancreatic dysfunction in patients with iron overload due to hereditary hemochromatosis (HH) or hemosiderosis (SH) secondary to multiple transfusions. **Method:** This is a cross-sectional study in which we evaluated the prevalence of altered glucose metabolism, demonstrated by the evaluation of glycosylated hemoglobin (HbA1c) obtained by High Performance Liquid Chromatography (HPLC). Data was analyzed using the IBM SPSS Statistics 20 software. The study was approved by the local Ethics Committee (CAAE: 67181817.3.0000.5045). **Results:** Twenty one HbA1c evaluations were performed, 9 (42.9%) patients had HH and 12 (57.1%) SH. Among these patients, 10 (47.61%) were abnormal, 6 cases of glucose intolerance and 4 cases of *diabetes mellitus* (DM). These patients, all with HH, already had been diagnosed. Among patients already diagnosed, 2 were treated with insulin, 1 with linagliptin and 3 with metformin (1 associated with insulin, 1 with linagliptin and 1 alone). The prevalence among patients with HH was 44.4% and a trend was observed towards more severe disease, with 75% of DM. The mean HbA1c in these patients was 6.24% (4.2%-10.7%, SD: 2.17). Among the patients with HS, a prevalence of 50% was observed, with a trend towards intolerance to glucose (83.3%). The mean HbA1c in these patients was 5.25% (4%-7.2%, SD: 1.06). The glycemic changes were more frequent in males (55.5% x 41.7%), older patients (55.4 x 49.8 years), those with longer disease duration (65.7 x 31.45 months) and those with higher ferritin levels (2313.79 x 887.86 ng/mL). There were no significant differences in BMI (24.5 x 23.35,  $p = 0.564$ ), abdominal circumference (90 x 88.5 cm,  $p = 0.802$ ), cervical circumference (34.9 x 35.7 cm,  $p = 0.714$ ) or physical activity (30% x 27.2%,  $p = 1$ , 151.67 x 120 min/week,  $p = 0.391$ ). **Conclusion:** Glucose metabolism disorders are very frequent in patients with iron overload, especially in older patients, with longer disease duration and greater magnitude of overload. Patients with HH had a tendency for more severe manifestations.

**68568 DOSE-RANGING EFFECTS OF SGLT2 INHIBITORS IN PATIENTS WITH TYPE 2 DIABETES: A SYSTEMATIC REVIEW AND META-ANALYSIS**Cristiane Bauermann Leitão<sup>1</sup>, Lana C. Pinto<sup>2</sup>, Dimitris V. Rados<sup>2</sup>, Luciana R. Remonti<sup>2</sup>, Marina V. Viana<sup>2</sup>, Jorge L. Gross<sup>2</sup><sup>1</sup> Hospital de Clínicas de Porto Alegre, Universidade Federal do Rio Grande do Sul (UFRGS). <sup>2</sup> Hospital de Clínicas de Porto Alegre

**Introduction:** The lowest dosage of empagliflozin (10 mg) produced similar benefits on glycated hemoglobin (HbA1c), body weight, blood pressure, total and cardiovascular mortality in comparison with the highest available dose (25 mg) in EMPAREG trial. It is uncertain if the other two agents, canagliflozin and dapagliflozin, behave similar. **Objective:** To compare the effect of different doses of SGLT2 inhibitors in HbA1c and body weight of patients with type 2 diabetes. **Methods:** MEDLINE, Cochrane and Embase databases were searched for randomized controlled trials of SGLT2 inhibitors in type 2 diabetes patients, lasting at least 12 weeks. HbA1c and body weight variations were described as standard mean difference. We performed direct, indirect meta-analysis, as well as a metaregression with medications doses as covariates. Trial Registration Number: CRD42015006975. **Results:** Eighteen studies were included (16,095 patients). In direct meta-analysis, canagliflozin, dapagliflozin and empagliflozin lead to similar effects on HbA1c (-0.62%; 95% CI -0.66 to -0.59) and body weight (-0.60 kg; 95% CI -0.64 to -0.55). Indirect meta-analysis showed that canagliflozin 300 mg had the greatest effect in both HbA1c and body weight reduction (-0.79%; 95% CI -0.84 to -0.75; -2.35 kg; 95% CI -2.73 to -1.97), however the differences from the other medications or dosages was clinically irrelevant (-0.15 to -0.44% in HbA1c and -0.28 to -1.04 kg in body weight). All SGLT2 inhibitors in different doses were associated with an increased risk for genital infection. **Conclusions:** Different doses of SGLT2 inhibitors results in similar reductions of HbA1c and body weight. Whether these glycemic and weight effects reflect on mortality and cardiovascular events is still uncertain and may be topic for further studies.