Introduction: Polycystic ovary syndrome (PCOS) is a condition that affects about 7% of women in reproductive age. It's associated with several metabolic disorders, including insulin resistance (IR) and metabolic syndrome (MS). Insulin resistance, in turn, is closely related to thyroid dysfunction (clinical and subclinical hypothyroidism), as some studies have shown. I recently started to study the relationship between PCOS and thyroid disorders and have no work pointing higher incidence of chronic autoimmune thyroiditis (AIT) in women diagnosed with PCOS. However, these studies are still scarce. Objectives: This project aims to assess the prevalence of AIT in patients with PCOS, their equivalence ultrasound, and to compare these findings in women with and without PCOS. Subjects and methods: there will be a cross-sectional study with clinical assessment, data collection from patient records, collecting blood tests, thyroid ultrasound assessment of women attending the outpatient endocrine gynecology and family planning in the Department of Obstetrics and Gynecology, Faculty of Medical Sciences State University of Campinas. These data will be transferred to chips own collection of study. Statistical analysis: The sample size was calculated on 130 subjects. Calculations will be made simple and prevalence odds ratio to compare them. Secondly, to compare the serum
levels of TSH, with the findings of antithyroid antibodies and thyroid ultrasound changes, we use the Student t test or the Kruskal-Wallis test, which will assess whether or not the data is parametric. Results: Women with PCOS had average body mass index and Ferriman - Gallwey, insulin and fasting glucose, higher than the control group. The prevalence of subclinical hypothyroidism (SCH) in women with PCOS was 16.9 %, also higher. There was no difference regarding the occurrence of anti-TPO and ATG, but the diagnosis of AIT, considering the presence of antithyroid antibodies, thyroid dysfunction and ultrasound results, was higher in the group with PCOS. Conclusion: The higher prevalence of HSC and AIT in women with PCOS indicates the necessity of keeping surveillance on their periodic thyroid function, but do not point the necessity of routine investigation of antithyroid antibodies.