

## Body fat distribution in women with premature ovarian insufficiency on estroprogestative hormone therapy

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**Context:** Hypoestrogenism in postmenopausal women is related to the accumulation of adipose tissue, considered a risk factor for cardiovascular diseases. Young women with premature ovarian insufficiency (POI) are treated with hormonal therapy (HT) to minimize the effects of early hypoestrogenism, but the consequences on their body composition are not well known. **Objective:** To evaluate the composition of fat mass and lean mass in women with POI using HT. **Methods:** A cross-sectional study evaluated the body composition (lean and fat mass) of women with POI using HT and women with normal gonadal function (controls) matched by age ( $\pm 2$  years), BMI ( $\pm 2\text{kg/m}^2$ ) and intensity of physical activity. All subjects underwent body densitometry using a densitometer (DXA) and physical activity evaluation using the IPAQ questionnaire. Data were presented as mean and standard deviation; the comparison between the groups used paired Student-T test. The study was approved by the Committee of Ethics under number n<sup>o</sup>1451865/2015. **Patient(s):** 48 women with POI on HT and 96 women with normal gonadal function (controls) matched by age ( $\pm 2$  years), BMI ( $\pm 2\text{kg/m}^2$ ) and physical activity intensity. **Intervention(s):** none. **Main Outcome Measure(s):** Densitometer (DXA) to estimate fat and lean body mass, gynoid and android distribution and the gynoid/android ratio; IPAQ questionnaire for physical activity. **Result(s):** The mean age and BMI were  $35.3 \pm 7.7$  years and  $26.9 \pm 4.3 \text{ kg/m}^2$  for the POI group and  $35.5 \pm 7.6$  years and  $26.7 \pm 4.1 \text{ kg/m}^2$  for controls ( $p > .05$  for both). The mean fat mass was  $29.69 \pm 8.81$  (Kg) and  $28.34 \pm 9.88$  (Kg), respectively ( $p = .44$ ), and lean mass was  $35.79 \pm 4.67$  (Kg) and  $36.63 \pm 5.70$  (kg) ( $p = .40$ ). There was no difference in the gynoid and android ratio between POI and control groups, respectively  $0.9 \pm 0.1$  and  $0.9 \pm 0.1$  ( $p = .16$ ), but the Android region was  $49.6 \pm 7.1$  (POI group) and  $46.6 \pm 8.9$  in the control group,  $p = .05$ . **Conclusions:** Young women with POI treated with HT had body composition (lean and fat mass) and fat distribution similar to that of women with preserved ovarian function at the same age and BMI and similar physical activity. It suggests that, HT and lifestyle orientation, including physical activity, may prevent adipose tissue accumulation, one of the cardiovascular risk factors associated to POI.

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