urban and rural boys (p < 0.001), and was 26.2+/–7.8 and 24.5+/–7.1 for urban and rural girls (p < 0.01).

The overall prevalence of overweight was 38.3% in boys and 24.6% in girls for urban children and was 30.4% and 20.5% for rural children. The mean BMI was no statistical difference between urban and rural area (26.0 vs. 26.3 for boys and 25.4 vs. 25.4 for girls). However, the %BF was higher for urban overweight children when compared with rural overweight children (28.8 vs. 26.5 for boys, p < 0.05 and 36.5 vs. 32.9 for girls, p < 0.001).

Conclusion: Using BMI as cot-off points of overweight for children at urban and rural area may be biased (or underestimate for the urban children). Body fat composition may be a more appropriate criteria for children comparing with different areas.

✓ 5 Gender difference in intra-individual double burden of malnutrition among urban Tunisian adults

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Introduction: In the context of nutrition transition, North-African countries are facing rapid increases in overweight/obesity while under-nutrition such as anaemia and iron deficiency (ID) remains highly prevalent. This study aimed at comparing the variation of this double burden at individual levels with environment and socioeconomics among Tunisian urban men and women.

Methods: Cross sectional survey (stratified two-stage clustered sample) of 1689 female and 930 male, 20–49 y living in the Great Tunis. Overweight, obesity and abdominal obesity were defined using WHO criteria. Anaemia was defined by gender specific WHO cut-offs and ID by serum ferritin concentration (<15 μg/L), after correction for inflammation (CRP >5 mg/L and/or orosomucoid >1 g/L). Adjusted associations for geographic and socioeconomic characteristics (educational level, marital and professional status, household economic level, age, parity) were assessed by logistic regression.

Results: The coexistence of overweight/anaemia was much higher (P < 0.0001) among women vs. men (25.7%[22.9–28.6] vs. 3.7%[2.4–5.7]) as was obesity/anaemia (12.8%[11.1–14.7] vs. 1.2%[0.6–2.3]) and abdominal obesity/anaemia (16.7%[14.2–19.3] vs. 1.0%[0.5–2.0]). Similar results were observed for the association of overweight/obesity/abdominal obesity with ID. Overweight/anaemia was associated with age for both genders while obesity/abdominal obesity with aneamia were related to married status and parity for women and household economic level for men. The same risk factors were observed for overweight/obesity/abdominal obesity with ID.

Conclusion: A quarter of women presented double burden whereas less than 4% of men were affected. Except age which is associated in both genders, determinants were physiological in women and economic in men inducing nutrition interventions targeted at women as group at risk.

T6:OS1 – Cardiometabolic interactions

T6:OS1.1
Effects of therapeutic weight loss and metabolic improvement on P wave dispersion in overweight and obese patients

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Introduction: Obesity represents an independent risk factor for the development of atrial fibrillation. Atrial electrophysiology can be represented by a basic, noninvasive ECG indicator: P wave dispersion. Our aim is to investigate the effects of therapeutic weight loss and metabolic improvement on P wave dispersion in obese and overweight patients.

Methods: We performed a post hoc analysis of prospectively gathered data from a randomized clinical trial. 32 healthy overweight and obese patients [16 males and 16 females (respectively mean age ± sd: 48 ± 11.8 and 48 ± 12 years; mean body mass index (BMI) ± sd: 32.1 ± 3.4 and 33 ± 3.9 kg/m2)] were examined for six months. They were treated with a hypo caloric balanced diet (–500 Kcal/day), aiming at 5% weight loss at the 6th month. Glycaemia, lipid profile, and an electrocardiogram (ECG) have been checked at t0 and t6. ECGs were transferred to a personal computer via a scanner and then magnified 400 times to examine P wave dispersion.

Results: Both responders and not responders (mean weight loss ±sd respectively $–8.6 \pm 2.92$ % and $–1.76 \pm 2.59$ %) ameliorated metabolic profile, especially responders [glucose level –6,5% (p = 0.008), LDL –6.9% (p = 0.04)]. Responders showed a more significant P wave dispersion reduction [$–0.42 \pm 0.22$ ms, $–34.87 \pm 12.76$ % (p = 0.004)], than not responders [$–0.13 \pm 0.34$ ms; $–8.34 \pm 32.44$ % p = 0.008]. The correlation analysis between the decrease of P wave dispersion and weight loss revealed good degree of correlation (r = 0,6 p = 0,0001).

Conclusion: Our findings suggest that weight loss induces a significant reduction on P wave dispersion.

T6:OS1.2
Correlation between Pulse Wave Velocity and Heart Rate Variability in Young Patients with Metabolic syndrome

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Introduction: To investigate the correlation between pulse wave velocity (PWV) and heart rate variability (HRV) in young patients with metabolic .(MS). Pulse wave velocity (PWV) is the most popular index for assessment the arterial stiffness

Methods: The analysis was performed in 45 patients – 22 men and 23 women mean age – 21–40 years with MS. And 10 normal volunteers. The PWV were exanimate a non-invasive digital volume pulse (DVP) measuring system using a dual channel simultaneous measurement method. The changes of systolic and diastolic blood pressure and of pulse rate after active standing were registered noninvasive

The RR intervals were recorded by means of MP 100 computerizes system with ECG module and the maximal –minimal interval during deep breathing (HRdb), the Valsalva ration (VR), and the 30 :15 ratio were calculated automatically