

Lean Mass and Fat Mass Distribution in Ukrainian Postmenopausal Women with Abdominal Obesity and Metabolic Syndrome

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Abstract : Objective: Menopause-related changes in female body are associated with the greater risk of metabolic syndrome (MS), which includes obesity, dyslipidemia, impaired glucose tolerance, hypertension. The aim of our study was to reveal peculiarities of fat and lean mass distribution between postmenopausal women with abdominal obesity and with MS. Materials and Methods: The sample consisted of 43 postmenopausal 60 - 69 years old women (age: mean = 64,8; S.D. = 0,4); duration of menopause: mean = 14,5; S.D.= 0,9). The diagnosis of MS was considered according to IDF (2005 yr) criteria. Lean and fat mass distribution were measured by dual-energy X-ray absorptiometry, and were compared for the cohorts with and without MS. Data were analyzed using Statistical Package 6.0 (Statsoft). Results: Findings revealed that 24 (55,8 %) of postmenopausal women had MS. In patients with and without MS compared, fat mass was higher in the former group ($41248,25 \pm 2263,89$ and $29817,68 \pm 2397,78$ respectively; $F=11,9$; $p=0,001$) and at different body regions also: gynoid fat ($6563,72 \pm 348,19$ and $5115,21 \pm 392,43$ respectively; $F=7,6$; $p=0,008$), android fat ($3815,45 \pm 200,8128$ and $2798,15 \pm 282,79$ respectively; $F=9,06$; $p=0,004$). Lean mass comparing didn't show significant differences in female with and without MS ($42548,0 \pm 1239,18$ and $40667,53 \pm 1223,78$ respectively; $F=1,1$; $p=0,29$) and at different body regions also. Conclusion: These findings suggest that in postmenopausal women with MS there is prevalence of fat mass without increasing of lean mass quantity in compare to female with abdominal obesity without MS.

Keywords : lean mass, fat mass, obesity, metabolic syndrome, women, postmenopausal period

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