RESULTS Participants with elevated ALT had higher levels of almost all cardiometabolic risk factors than other participants. Among individuals with elevated ALT, the weight, height, WC, and BMI, which were indicators for general and abdominal obesity, were significantly higher than those with normal ALT. The difference was not significant for the current smoking or physical activity. In the cardiometabolic risk factors, such as fasting plasma glucose (FPG), TG, HDL-C, LDL-C, and serum uric acid, were all more strongly in elevated ALT group than normal ALT group. The logistic regression analysis revealed that male sex, younger age, and presence of high TG, low HDL-C, current smoking status, BMI above 25 kg/m², abdominal obesity, hyperuricemia, and HtgW phenotype were significantly associated with elevated ALT level. Sex-related differences were also discussed. For the male, hypertension (OR 1.33, 95% CI 1.08-1.62), high TC (OR 1.63, 95% CI 1.07-2.41), and hyperuricemia (OR 1.92, 95% CI 1.52-2.40) were statistically related to an elevated serum ALT, but this was not so for the female.

CONCLUSIONS This study documented significant relationship of elevated ALT with cardiometabolic risk factors and several sex-related differences were indicated in Rural Chinese Population. The elevated serum ALT is associated with a worse cardiac risk profile.

GW26-e3874 Association between Metabolically Healthy Obesity and Hyperuricemia in Rural Chinese Population: A Cross-Sectional Study
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OBJECTIVES The present study investigated the association between MHO and the prevalence of hyperuricemia in a representative sample of adults living in rural Northeast Chinese population.

METHODS This was a cross-sectional study conducted during July 2012 to August 2013, including a total of 11,435 (5,300 men and 6,135 women) aged >35 years in rural areas of Liaoning Province. Anthropometric measurements, laboratory examinations, and self-reported information on lifestyle factors, such as physical activities, current smoking and drinking status, dietary habits and familial factors were collected by trained personnel.

RESULTS We showed a low prevalence of MHO (3.7%) and a high prevalence of MUO (14.5%). 47/11.2% of MHO suffered from hyperuricemia and 325/20.1% in MUO. As the weight increasing, the prevalence of hyperuricemia was rising significantly for male, but in female with metabolic healthy it’s not obvious. Both in male and female group, MHO and MUO were significantly associated with an increased risk of hyperuricemia. When obesity was accompanied with metabolically unhealthy, the risk degree was up to 4.90/95% CI: 3.20-7.14). The odds ratio of hyperuricemia was 2.77 (95% CI: 1.76-4.35) in the MHO subjects of male that was higher than metabolically unhealthy normal weight (OR=1.61, 95% CI: 1.20-2.17).

CONCLUSIONS Importantly, our present study reported the strong association of overweight/obesity and metabolic status with the prevalence of hyperuricemia. There was no healthy status in obesity subgroup for hyperuricemia. With metabolic healthy, obese persons should also pay attention to high risk of hyperuricemia.

GW26-e3886 A Body Shape Index and Body Roundness Index: Two new body indices to identify diabetes mellitus among rural populations in northeast China
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OBJECTIVES The Body Mass Index (BMI) has long been used as an anthropometric measurement. While waist circumference (WC) and waist-to-height ratio (WHtR) have been proposed as alternatives to BMI for some studies to discern between fat and lean mass have not been evaluated. Recently, two new anthropometric indices, the A Body Shape Index (ABSI) and Body Roundness Index (BRI) have been developed as possible improved alternatives to BMI and WC.

METHODS This cross-sectional study was conducted in the rural areas of northeast China from January 2012 to August 2013, and the final analysis included data obtained from 10,959 men and 5,092 women. ABSI, BMI, BRI and waist-to-height ratio (WHtR) were calculated according to their respective formulas.

RESULTS A linear regression analysis showed that the highest correlations with fasting plasma glucose (FPG) were shown by ABSI in men and WC in women. ABSI showed the lowest AUCs for DM in both sexes, while BRI had high AUCs for DM that nearly equaled those of WC and WHtR. A multivariate logistic regression analysis showed that ABSI had the lowest predictive power for DM in both sexes, while BRI was a better predictor.

CONCLUSIONS Our results showed neither ABSI nor BRI were superior to BM, WC, or WHtR for predicting the presence of diabetes mellitus. ABSI showed the weakest predictive ability, while BRI showed potential for use as an alternative obesity measure in assessment of diabetes mellitus.

GW26-e1539 Association of abnormal uric acid metabolism and atrial fibrillation in patients with essential hypertension
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OBJECTIVES Atrial fibrillation is the most common clinical arrhythmia, which has a complex etiology. It usually occurs with some other existing diseases. There is a type of atrial fibrillation happened together only with hypertension. Patients of this kind of atrial fibrillation had high serum uric acid level. Uric acid is a byproduct of purine catabolism. It is a newly found independent predictor of cardiovascular disease. But the relationship between uric acid and atrial fibrillation is still unknown. Our hypothesis is in the atrial, uric acid could reduce ability of vasodilation which leads to vessel fibrosis. Then the structure of the atrium changes, finally atrial fibrillation happens.

METHODS In this retrospective study we recruited consecutive patients with essential hypertension in our hospital between January 2010 and December 2014. Hypertension was diagnosed as blood pressure levels more than 140/90 mmHg (mean of 3 measurements) in the supine position or the use of antihypertensive medications. The arrhythmia diagnosis required documentation from an official medical record, a 12-lead ECG, or a 24-hour Holter recording and its classification was based on authoritative international consensus statements. Exclusion criteria were history of coronary artery disease, valvular heart disease, congenital heart disease, cardiomyopathy, left ventricular systolic dysfunction, previous cardiac surgery, diabetes, thyroid disease, serum creatinine >110 μmol/L, recent infection, autoimmune or inflammatory diseases, respiratory diseases, administration of drugs that affect UA metabolism (apart from diuretics). Each clinical process note contains patient’s basic condition and the blood and urine test, results, especially cardiac ultrasound, renal function and cholesterol.

RESULTS Nine hundred and forty patients were finally included in the analysis. We classify the study population according to the presence or absence of atrial fibrillation. There were no significant differences between the two groups regarding sex, WBC Count, potassium level, serum Cr levels, systolic and diastolic blood pressure, LVFWT and IVST. Compared with the patients without AF, patients with AF were older (67,13.10.59 years old vs. 65,18.10.57 years, p<0.001) had a longer duration of hypertension (9.27±9.50 years vs. 8.35±3.57 years, p<0.001), higher uric acid level (388±112±12.51 μmol/L vs. 311.5±122.51 μmol/L, p<0.001), increased LAD (45.79±7.56 mm vs. 34.08±4.36 mm, p<0.01). The association between uric acid and atrial fibrillation was further assessed by logistic regression analysis. This analysis showed independent associations be- tween atrial fibrillation and uric acid (OR = 1.014; 95% CI: 1.005-1.023, p = 0.002), and LAD (OR = 1.390; 95% CI: 1.221-1.582, p< 0.001).

CONCLUSIONS We found uric acid levels are related with atrial fibrillation in hypertensive patients. The role of uric acid-lowering therapy in patients with hypertension will be a new insight into preventing atrial fibrillation improvement in those patients.

GW26-e2209 Plasma Triglyceride is a predictive factor for arterial stiffness: a community-based 4.8-year prospective study Abstract
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OBJECTIVES Arterial stiffness has been increasingly recognized as a strong predictor of cardiovascular disease (CVD) and atherosclerotic disease. The association between triglyceride and arterial stiffness is