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**THE EFFECT OF METABOLIC SYNDROME ON CAROTID ARTERY INTIMA-MEDIA THICKNESS IN PATIENTS WITH ESSENTIAL HYPERTENSION**

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**Objective** To evaluate the influence of the metabolic syndrome (MS) on artery intima-media thickness (IMT) and/or plaque in patients with essential hypertension (EH).

**Methods** A total of 1505 EH patients were chosen, including 659 male patients and 846 female patients, with age from 20 to 90 years old. These patients were divided into MS group (EH with MS) and non-MS group (EH without MS), MS group was then divided into glucose abnormal subgroup, fat abnormal subgroup and glucose and fat both abnormal subgroup. Carotid IMT and plaque were detected and measured by B-ultrasound.

**Results** The age, abdominal circumference, body mass index (BMI), fasting blood glucose (FBG), total cholesterol (TC), total triglycerides (TG), low density lipoprotein cholesterol (LDL-C), uric acid (UA) and hypersensitive C reactive protein (hsCRP) in MS group were significantly higher than non-MS group, while high density lipoprotein-cholesterol (HDL-C) in MS group was significantly lower than non-MS group. The IMT in fat abnormal subgroup, glucose abnormal subgroup, glucose and fat both abnormal subgroup and non-MS group,

were  $(0.86\pm 0.18)$  mm,  $(0.90\pm 0.20)$  mm,  $(0.89\pm 0.18)$  mm and  $(0.84\pm 0.17)$  mm, respectively ( $p=0.001$ ). In MS group with abnormal blood glucose, the incidence of IMT and plaque was the highest. Logistic regression analysis showed that males, age, smoking, MS, FBG, LDL-C were the independent risk factors for carotid atherosclerosis. IMT was strongly related with FBG.

**Conclusion** MS has significant effects on carotid atherosclerosis in patients with EH. Glucose may play more important part in carotid atherosclerosis than other compositions.