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RELATIONSHIP BETWEEN MORNING BLOOD PRESSURE SURGE AND CARDIOVASCULAR RISK FACTOR IN PRIMARY HYPERTENSIVE PATIENTS

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Objective To investigate the relationship between morning blood pressure surge and cardiovascular risk factors in primary hypertensive patients.

Methods According to the results of 24 h ambulatory blood pressure monitoring, 322 patients were classified as the morning BP surge group (MBPS group, n=149) and non-surge group (NMBPS group, n=173). Blood lipid and fasting blood glucose were recorded.

Results Age, FBG, 24 h SBP, nSBP, dSBP, 24 h PP, dPP, nPP, 24 h MAP, dMAP, nMAP were higher in MBPS group than those in NMBPS group ($p < 0.01$ or $p < 0.05$). Pearson relation analysis showed that morning blood pressure level positively correlated with age ($r = 0.446$, $p < 0.001$), 24 h SBP ($r = 0.347$, $p < 0.001$), FBG ($r = 0.388$, $p < 0.001$), nSBP ($r = 0.166$, $p = 0.043$), dSBP ($r = 0.190$, $p = 0.02$), LDL C ($r = 0.244$, $p < 0.01$), TC ($r = 0.188$, $p = 0.022$); after adjusting other risk factors, multiple regression analysis showed age, 24 h SBP and FBG remained as predisposing risk factors for MBPS level.

Conclusion Age, 24 h SBP and FBG are the important influencing factors of morning blood pressure surge.