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CLINICAL STUDY OF FOUR LONG RANGE HUMAN PHYSIOLOGY PARAMETERS MONITORING IN HYPERTENSION PATIENTS

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Background The authors carried out ambulatory monitoring of four human physiology parameters by using long range transmission technology in hypertensive patients.

Methods Eighty one hypertension (average age 60.85 ± 8.65) from communities of Taiyuan city were selected. The four-parameter real-time monitoring including ECG, blood pressure, blood sugar and oxygen saturation were obtained once 2 h, total six times in 1 day at home. The dates were wireless transmission and analysed by monitoring centre doctors.

Results The group variables were sex, age, salinity, physical exercise and BMI. Diastolic pressure load were (33.13 22.47, 11.01 14.93, 4.61 2.45, $p=0.001$), oxygen saturation load were

(0.69 1.94, 13.44 22.95, 43.28 12.00, $p<0.001$) in 41–55 years old, 6–65 years old, and ≥ 66 years old. Heart rate fluctuation were (19.41 9.84, 14.26 8.90, 9.67 5.43, $p=0.021$) in normal body weight group, overweight group and obesity group. Blood sugar load in female was higher than in male (31.78 11.97, 52.23 16.49, $p=0.011$).

Conclusion The diastolic pressure load decreased and oxygen saturation load increased with the age increasing. Heart rate fluctuation increased with the weight increasing. Blood sugar load in female was higher than in male. Ambulatory monitoring of the four physiology parameters by long range monitoring technology may help to control risk factors.