P131 METABOLIC SYNDROME AND INSULIN RESISTANCE IN WORKERS

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Objectives The epidemiologic characteristics of metabolic syndrome (MS) and insulin resistance should be an important task for health promotion in workers.

Methods Analysing 3100 data (female: 1125, male: 1975) aged 31.5±12.1 years from completely decoding health surveillance bank. HOMA-IR as insulin sensitivity index was calculated by (Insulin (μU/ml) X Glucose (mmol/l)/22.5). MS was defined on updated NCEP/ATP III criteria modified for Asians.

Results The prevalence of MSin our group was 12%. The 75th percentile of HOMA-IR in non-diabetic cases was 1.88. Diabetes mellitus (DM) was the most significant predictor for MS (10.4 vs 69%, OR=12.0–31.1). In non-diabetic, the major factors were HOMA-IR≥1.88 (4.7 vs 27.6%, OR=6.1–10.1), age, sex (♀=4.5%,♂=13.8%, OR=2.5-4.7), hypertension (6.6 vs 35.7%, OR=6.0–10.1), abnormal liver function GPT≥1.3X (8.5 vs 34.7%, OR=4.2–7.8), central obesity (5.2 vs 33.5%, OR=7.1–11.8), body mass index(BMI) (normal (18.5≥BMI<24)=1.9%, overweight (24≥BMI<27)=15%, mild obesity (27≥BMI<30)=34.2%, moderate obesity (30≥BMI<35)=54%, morbid obesity (BMI≥35)=50%, p<0.001), low HDL (6.4 vs 32.3%, OR=5.4–9.0), triglyceride (TG)≥150 mg/dl (3.5 vs 43.8%, OR=16.2–28.1), work-shift (6.1 vs 16.9%, OR=2.4–4.0), work-loading (non=7.4%, heavy=16.1%, OR=1.9–3.0). Logistic regression analysis revealed HOMA-IR, hypertension, TG, BMI, age, GPT≥1.3X, and low HDL were associated with MS in non-diabetics. MS (20.2 vs 66.3%, OR=6.1–10) was the highest predictor of HOMA-IR≥1.88 in non-diabetics. Logistic regression analysis revealed that metabolic syndrome, age≥40 year, GPT≥1.3X, central obesity, BMI≥24, TG≥150 mg/dl, and non-heavy work loading were the major determinants of HOMA-IR≥1.88.

Conclusions High prevalence of MS was noted in workers and it predicts insulin resistance.