ABSTRACTS

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exposed to simulated 5300 m altitude (10.7% O_2) for 30 minutes. HR and SaO_2 were measured using pulse oximetry. There was a positive correlation between the magnitude of the diving response (ΔHR during apnea) and the lowest SaO_2 at simulated altitude ($r = 0.605$; $p = 0.029$). There was also a positive correlation between minimum SaO_2 during 1 minute apnea and at 5300 m altitude ($r = 0.647$; $p = 0.017$). We concluded that there is an association between the apneic diving response and SaO_2 at high altitude, suggesting that the same defense system is involved in both situations. This association could help explain the interindividual differences in high-altitude susceptibility and be the first step in developing a predictive test for the individual risk of AMS.

4009
CROSS-SECTIONAL AND PROSPECTIVE STUDY OF THE ASSOCIATION BETWEEN LIFESTYLE, INDIVIDUAL RISK FACTORS, AND ACUTE MOUNTAIN SICKNESS

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In recent years, there has been an increase in the attendance of people at high altitudes for both tourism and work, so high-altitude diseases represent a non-negligible public health problem. This research examined cross-sectional and prospective associations of lifestyle, individual risk factors, and acute mountain sickness (AMS) in a community-based sample recruited in the cross-border area (Switzerland, Italy, and France Alps). Questionnaires were administered in the five mountain locations in Aosta Valley between 1500 and 3500 m. Data were analyzed from 1002 subjects (males 68.7%, females 31.3%; mean age 42 ± 14 years) in a cross-sectional study (session T0) and from 1112 interviews in a longitudinal study on three consecutive days (session T1-T2-T3), $n = 631$ in T1, $n = 300$ in T2, and $n = 181$ in T3. According to Lake Louise Score self-reported, at session T0, 35.9% of the subjects were classified as mild AMS and 17.5% as moderate–severe AMS. Among the subjects enrolled in the prospective study, 36.5% were classified as mild or moderate/severe AMS in at least one of the 3 days. Predisposing factors to AMS detected in the prospective study were gender (male; odds ratio [OR] = 1.4, confidence interval [CI]: 2.9–11.7; $p = 0.001$), history of strenuous physical activity (>3 times per week) (OR = 3.1, CI: 2.1–8.7; $p = 0.001$), smoking >5 cigarettes per day (OR = 2.4, CI: 2.0–6.5; $p = 0.001$), difficulty sleeping (≤6 hours), and previous AMS episode (OR = 1.4, CI: 1.2–1.6; $p = 0.001$). Life style could increase AMS risk. Further studies are needed to investigate whether interventions in life style behavior can modify the impact in high-altitude diseases.

4010
ANALYSIS OF RISK FASTORS ASSOCIATED WITH PROTEINURIA IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA–HYPOPNEA SYNDROME IN HIGH-ALTITUDE AREA

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Objective: To analyze the prevalence and risk factors of proteinuria in obstructive sleep apnea–hypopnea syndrome (OSAHS) in Qinghai.
Methods: Data of patients diagnosed with OSAHS from November 2015 to November 2017 at the Affiliated Hospital of Qinghai University were continuously collected and patient's gender, nationality, age, lipids, HbAlc, and blood uric acid (UA), white blood cell count (WBC), hemoglobin (Hb), fasting blood glucose (GLU), smoking history, history of hypertension, history of coronary artery disease, body mass index (BMI), altitude, and 24-hour urine protein quantification were retrospectively reviewed. Inter-related and risk factors were analyzed.
Results: The detection rate of proteinuria in patients with OSAHS was 29.41% (35/119). There was no significant difference in age, nationality, gender, WBC, UA, Hb, GLU, smoking history, and coronary heart disease between OSAHS with proteinuria and uncombined proteinuria ($p > 0.05$); BMI with proteinuria HbAlc was higher than those without proteinuria ($p < 0.05$). The prevalence of hypertension and dyslipidemia in patients with proteinuria was significantly higher than those without albuminuria ($p < 0.05$). Whether or not the patients with OSAHS had proteinuria as the dependent variable and the univariate analysis as independent variables (hypertension, dyslipidemia, elevation, BMI, and HbAlc) was analyzed by multivariate logistic regression analysis, the results were retained at the a = 0.05 level. The variables of the model are altitude and HbAlc. The OR values are 1.002 and 3.359.
Conclusions: The detection rate of proteinuria in patients with OSAHS in Qinghai is 29.41% (35/119). The detection rate increases with HbAlc and altitude. HbAlc has the greatest effect on the detection rate and is the main independent risk factor.

4012
PHYSIOLOGICAL PARAMETERS TO PREDICT ACUTE MOUNTAIN SICKNESS BASED ON LAKE LOUISE QUESTIONNAIRE SYMPTOMS: RESULTS FROM THE SHERPA-EVEREST'2017 PROJECT

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Lake Louise Scoring (LLS) uses a questionnaire to evaluate adults for symptoms of acute mountain sickness (AMS). With the aim of assessing the effect of cardiorespiratory function and the stage trail structure in the automatic prediction of LLS, measurements for 15 well-trained healthy trekkers were recorded along seven stages along the route from Lukla (2860 m) to Everest base camp (5364 m). These involve rest-