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RELATIONSHIP BETWEEN OCCURRENCE OF HEAT STROKE AND NUTRITIONAL STATUS

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Aim: In order to examine the relationship between heat stroke and dietary habits, we conducted physical examinations for the groups exercising daily.

Methods: The target was 211 junior and senior high school boy students of the athletic club in Hyogo in 2009 (H group: 15.4 ± 4.5 years old) and 127 students of the athletic club in Saitama in 2016 (S group :13.1 ± 1.1 years old). Health examination consisted of height, weight, measurement of body composition, blood pressure, nutritional questionnaire and 24 hour-urine collection by using Aliquot cups. For nutritional investigation, FFQg and BDHQ were used for H and S groups, respectively. We asked additionally questionnaires about the occurrence of heatstroke (HS) to investigate the relationships between eating habits and heatstroke experiences.

Findings: In the H group, 41.2% (91 students) experienced HS (HS group). FFQg showed significantly lower intake of eggs and significantly higher intake of sweet food, for example confectionery, sweet drink and sugar than those who experienced no heatstroke (nHS group). In addition, HS group took more Na than K because Na/K ratio of 24-hour urine was significantly higher than nHS group. In the S group, 29.1% (37 students) experienced HS. The results of BDHQ showed significantly lower intakes of vitamins B, potassium, β carotene and dietary fiber but significantly higher intake of confectionary in HS group than in nHS group. These dietary habits were similar to HS group in H group. But in S group the result of 24-hour urine Na/K ratio in HS group was significantly lower than nHS group and the result was different from H group.

Conclusion: The dietary habits in HS group tended to be bad in both H and S groups, but we noted different result of the Na/K ratio of the 24-hour urine analysis in both groups, so further study is necessary.

Biography

Mari Mori is a National Registered Dietitian, Lecturer of Mukogawa Women's University Institute for World Health Development, and head of food education group Healthy plus. She is on Board of Directors of Association of Slow Calorie Research, Councilor of the Japanese Society Cardiovascular Diseases Prevention and a member for numerous organizations such as the Japan Dietetic Association, Japan Society of Nutrition and Food Science, Japanese Society of Public Health and Japan Sports Nutrition Association. She won "Sugita Genpaku Award" for food education from Obama City, Fukui Prefecture (2017).

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