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Editorial

Prevention of alcohol-related health harm in the workplace

Prevention of alcohol-related health problems is one of the most central issue worldwide. In Global Burden of Disease (GBD) Study 2010, alcohol use was the third and the eighth leading risk factor for the disability-adjusted life years (DALYs) in men and women, respectively[1]. World Health Organization has adopted the global strategy to reduce the harmful use of alcohol in 2010[2] to reduce serious harmful health problems caused by alcohol abuse. The global action plan 2013–2020 has set the goal of at least 10% relative reduction in the harmful use of alcohol[3].

In Japanese men, the proportion of the habitual alcohol drinkers who drink more than or equal to three days per week and drink one unit of alcohol (about 23 g) each day they drink were more than 50% in 1995, while that decreased to about 35% in 2010[4]. During the same period from 1995 to 2010, the proportion of habitual drinkers were around 7–8% and no significant changes have been observed in Japanese women. The proportion of those with alcohol dependence diagnosed by ICD-10 or with alcohol use disorders assessed by AUDIT has not changed during the period between 2003 and 2013 in both sexes in the periodical nationwide survey[5]. Thus, harmful use of alcohol remains to be one of serious problems in Japan.

East Asian people have two important genetic polymorphisms in alcohol-metabolizing enzymes; *ADH1B* and *ALDH2*[6]. These two polymorphisms result in considerable differences in alcohol sensitivity and alcohol drinking behavior[6]. Those with high alcohol sensitivity have increased risk for esophageal cancer when they habitually drink heavily[7]. Asthmatic patients with high alcohol sensitivity has been associated with experience of alcohol-induced asthma[8]. On the other hand, those with low alcohol sensitivity have increased risk for alcoholism[9].

Job stressors have been associated with heavy drinking in male Japanese workers[10, 11]. A stressful psychosocial work environment has been found to be a risk factor for alcohol dependence in workers[12]. Long-term heavy exposure to ethanol would lead to many harmful consequences including alcoholism, hypertension, chronic liver diseases, pancreatitis, and alcohol-related cancers. Thus, it is of importance for occupational physicians and health staffs to find not only alcohol-related health problems but also presence of job stressors which might be related to alcohol abuse.

Previously we reported that both daily hassles and the genetic polymorphism in the *ALDH2* gene were associated with problem drinking in male Japanese workers[13]. In east Asia, if public genetic testing service for the *ADH1B* and *ALDH2* gene is provided with enough ethical consideration, it would be of help to promote personalized prevention of harmful alcohol-related diseases, especially for workers who tend to drink heavily and have job stressors.

In Japan, Basic Act on Measures against Alcohol-related Health Harm was put into force in 2014[14]. Under this law, the national and local governments are going to make the basic plan for the promotion of measures against alcohol-related health harm. The act referred to responsibilities of the National and Local Government, business operators, citizens, physicians, and health promotion service providers.

There are many areas where occupational physicians and/or occupational health staffs can contribute including education and promotion of learning and public relation activities concerning alcohol related-problems, discovery of alcohol-related health harm, and health guidance and/or brief intervention[15] for preventing occurrence, progression, and relapsing of alcohol-related health harm. They can also provide appropriate advice for workers who have driven under the influence of alcohol. The most important thing is that they can play important roles in rehabilitation of those with alcoholism into the worksite by understanding and supporting them.

Accumulating evidence shows that occasional or light/moderate drinking might be beneficial to health[16–18]. On the other hand, even light/moderate drinking would increase risk for alcohol-related cancers[19, 20]. Thus, more evidence is needed to determine truly beneficial amounts of alcohol consumption.

Occupational studies and practice aiming at promotion of healthy alcohol drinking and prevention of various alcohol-related health problems described above should be further encouraged worldwide in the coming decades.

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