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Title: Relationships between urological symptoms and life style in healthy male workers

Aims of Study:

Symptoms (difficulty in micturition, urinary frequency and nocturnal urination) are common in patients who visit urological clinic. In order to study the correlation between urological symptoms and life style and/or working condition, we analyzed subjective symptoms of over six thousand workers in a steel company recorded at annual health examination for seven years form 1992 to 1998.

Methods:

The questionnaire for urological symptoms are difficulty in micturition, urinary frequency and nocturnal urination. The answers were made by each people in three grades (always, sometimes, none). Relationships between urological symptoms and age and life style including working style, educational background, drinking and smoking habits were studied in a retrospective manner.

The main analysis were performed in the data of 6242 male in 1998. The significant results were reconfirmed in the data of other six years. Finally, the consistent results for seven years were accepted as significant. Profile of people were shown in table 1. The statistical analysis was performed by using JUSE package software for windows 95/98/NT4.0 (version 1.51 1999). Significance was accepted in case of a probability less than 0.05.

Results:

The rate of workers who complain urological symptoms was increased with age. Especially nocturnal urination demonstrated good correlation with age (Fig.1). Nocturnal urination was experienced more frequently in the people who drank alcohol regularly (table 2). Complaints of nocturnal urination frequency were less common in people who smoked (table 3). Other factors including working style and educational background did not show any influence on the percentage of people who complain symptoms.

Conclusions:

The age is an independent factor which induce the urological symptoms. Drinking and smoking habits are also independent factors which can affect on the frequency of nocturnal urination.

. Table 1: Profile of 6242 workers in 1998

Working Style	White 2215	Blue (day time work) 2208	Blue (shift work) 1919
Educational background	High school 4331	College 1911	
Drinking Habit	Non-drinker 1445	Drinker 4797	
Smoking Habit	Non-smoker 1623	Stopped-smoker 1015	Smoker 3604

Age distribution	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 60
Number of people	477	569	440	391	679	1128	1099	1459

Table 2: Relationships between nocturnal urination and drinking habit (%).

Nocturnal urination	every night	sometimes	none
Non-drinkers	84 (5.8)	349 (24.2)	1012 (70.0)
Drinkers	322 (6.7)	1521 (31.7)	2954 (61.6)

Table 3: Relations: lips between nocturnal urination and smoking habit (%).

Nocturnal urination	Every night	sometimes	none
Non-smoker	134 (8.2)	424 (26.1)	1065 (65.6)
Stopped-smoker	106 (10.4)	379 (37.3)	530 (52.2)
Smoker	166 (4.6)	1067 (29.6)	2371 (65.7)

Fig. 1 Nocturnal frequency

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