

SAFETY SCIENCE

M o n i t o r

ISSUE 2 1997

VOL 1

Article 3

AN ANALYSIS OF OCCUPATIONAL HISTORY OF THE PATIENTS WITH RISK FACTORS IN THEIR WORK

MICHIHIRO KAMIJIMA¹, EIJI SHIBATA^{1,2}, NAOMI HISANAGA³,
YUICHIRO ONO¹, TATSUSHI ANDO⁴, HIROMI TAKAGI⁴,
YOSHINORI GONDA⁴, AND YASUHIRO TAKEUCHI¹

1 Department of Hygiene, Nagoya University School of Medicine, Nagoya, Japan

2 National Institute for Working Life, Solna, Sweden

3 National Institute of Industrial Health, Kawasaki, Japan

4 Kyoritsu General Hospital, Nagoya, Japan

ABSTRACT

Comprehensive occupational medical histories were taken for patients whose diseases were likely to be associated with occupational risk factors. The information on exposure was mostly based on direct interviews with the patients. Reviewing available information, we assessed the work-relatedness of the diseases. Analysis of 106 cases diagnosed as occupational diseases due to chemicals and dust revealed the high relative incidence of occupational lung diseases, the absence of occupational health services for small-sized enterprises, and the possible dysfunction in the services in large scale ones. Appropriate education and occupational health services are important especially for small-sized enterprises and workers who change jobs frequently.

INTRODUCTION

In 1995, about 600,000 patients with occupational diseases and trauma were recorded by Ministry of Labour in Japan. Among them, 9,230 patients were compensated for absence from work due to occupational injury or disease for 4 days and over. The most common cause was that due to traumatic injuries (6,451 cases, including 5,035 cases with accidental low back pain). The remaining cases were pneumoconiosis and its complications (1,326 cases), diseases due to abnormal temperatures (699 cases), diseases due to chemicals (311 cases), and so on (Ministry of Labour, 1996). The number of reported occupational injuries and diseases has gradually decreased in recent years.

On the other hand, there would be a considerable number of unreported cases, where patients are suffering from occupational diseases. When the patients notice the relationships between the onset of their symptoms and their occupations, they are usually very reluctant to talk about that with their employers. They are afraid that they might break the harmonious relationships with their supervisors, let themselves fall into a difficult situation, and run the risk of losing their jobs. These patients will never claim appropriate social compensation. Thus, the registered number under Workmen's Accident Compensation Insurance Law (WACIL) would be far from the actual number of the patients.

Since 1978, we have clarified occupational medical histories for patients suspected to have occupational risk factors. This study aimed to demonstrate the existence of latent patients with occupational diseases and the social background of them.

METHODS

Since March 1978 through December 1995, we have conducted an occupational health consultation activity at a hospital once a week. The hospital is located in Nagoya Port district, known as a traditional working class neighbourhood with many small-sized enterprises. We have interviewed a total number of 623 patients about their detailed occupational histories in an out-patient department for occupational poisoning. Most of the patients were referred to us with the suspicion that their signs, symptoms, and diseases had some association with occupational risk factors. After other causes of the illnesses than occupational factors were ruled out, we took comprehensive occupational medical histories. Exposures were assessed mostly based on the direct interviews of the patients. If further information was needed, we visited their workplaces. Sometimes we made additional exposure measurements using appropriate samplers and/or biological monitoring devices. Reviewing available information, we assessed the extent to which the diseases were due to risk factors in their work.

In this study, we selected definite cases of occupational diseases due to chemicals and dust. We excluded the cases in which causal relationships were not confirmed. Patients with musculoskeletal disorders were also excluded. Then we classified each case according to two criteria. The first criterion was that the disease could be assessed as resulting from exposure to hazardous substances in the patients' present workplace. We wrote medical certificates and sometimes contacted their supervisors to reduce the hazardous exposures enough to make the workers free from the disease after the reinstatement. The second criterion was that the disease could be identified as resulting from the chronic exposure in the patients' past workplaces. In such cases the diseases were usually irreversible, in which case we made the patients understand the necessity of following-up and gave them some advice like cessation of smoking, and, when possible, applied for the compensation provided by the WACIL.

RESULTS

One hundred and six patients (98 males, 57.4 ± 15.0 years old (y.o.), and 8 females, 41.0 ± 20.2 y.o.) were diagnosed as having occupational diseases due to chemicals and dust (Table). About 80 % of the patients suffered from respiratory diseases. Pneumoconiosis due to other causes than asbestos or talc were 52 cases (60.2 ± 12.3 y.o.), asbestos-related diseases were 16 cases, 68.9 ± 8.4 y.o.), and bronchial asthma were 12 cases, 42.3 ± 10.9 y.o.). Thirty-five patients suffered from diseases due to present exposure, and 71 due to past exposure. Almost all of the patients with pneumoconiosis had not been served by appropriate occupational health services during their working periods (21.3 ± 13.5 years). Ten patients among them (2 asbestosis and 8 other pneumoconiosis cases) changed jobs 7 or more times. Eleven patients (2 asbestosis and 9 other pneumoconiosis cases) were self-employed or free-lance workers (Table).

The size of the companies where patients worked was clarified for 72 patients (Figure). The result shows that small-sized enterprises with less than 50 employees, for which the employers do not have to contract with an occupational physician in Japan, reached 72 % (52 cases) of all the cases. Especially, 39 % (28 cases) of the patients worked in the enterprises with less than 10 employees. About half of them were self-employed or free-lance workers (15 cases). On the other hand, bigger companies with more than 300 employee account for about 13 % (9 cases) (Figure). As for obligatory medical examination provided by the Industrial Safety and Health Law, 15 patients (11 pneumoconiosis, 2 asbestos-related diseases, and 2 other cases) had undergone the examinations before they came to our hospital (Table). Among the 28 patients who worked in enterprises with less than 10 employees, only one had undergone the examination.

DISCUSSION

The present results indicate that a substantial proportion of patients who came to our hospital, suffered from occupationally related diseases. The causal relationships between the exposures and the diseases were established only after the clinical doctors suspected the relationships and referred patients to

us. Respiratory disorders were the most common occupational diseases we came across in our hospital. This is not generalised to other hospitals in Japan, as the patients were not collected following randomised design. The lung specialists in our hospital paid careful attention to the occupational lung diseases. Moreover, it should be noted that there are many small-sized or harbour-related companies where workers are exposed to various kind of dusts in the vicinity of our hospital.

As for the social background of occupational diseases, the diseases occurred mainly in small-sized enterprises. The patients in small companies with less than 10 employees had scarcely undergone medical examinations, which revealed the absence of occupational health services for them. Another problem was that self-employed workers were hardly compensated by WACIL in Japan unless they carried the optional insurance provided by the law. In addition, workers who changed jobs frequently were usually not followed up consistently. Thus, it is desirable that appropriate education and public occupational health services for them are established by law. On the other hand, we had some patients who worked in larger scale companies with registered occupational physicians. This suggested possible dysfunction in occupational health services even in such companies where workers underwent periodical medical examinations.

In conclusion, more attention should be paid to the health of the workers poorly covered with appropriate occupational health services. An improvement of the occupational health care systems for them is recommended.

References

Ministry of Labour, (1996) General guidebook on industrial health, Chusaibo, Tokyo, pp 261-263. (In Japanese)

Figure legend

Number of patients according to the size of their companies. Each company was classified into 7 groups by the number of employees. In case a patient changed companies, the adopted size was that of the company judged to be the most responsible for the disease development.

Table 1 **Number of patients diagnosed as occupational diseases due to chemicals and dust**

Diseases due to present exposure	Number	Self - employed	Changing jobs more than 7 time	Having undergone Medical examination
Organic solvent poisoning				
Acute	4	1		
Chronic	7	1		
Polymer fume fever	1 (1)*			
Metal fume fever	1			
Dermatosis	3 (1)			
Bronchial asthma	12 (3)	2		1
Other respiratory diseases	2			
Poisoning due to chromium	2			
Poisoning due to other substances	3 (1)		1	1
(Subtotal)	35 (6)	4	1	2
Diseases due to past exposure				
Chronic solvent poisoning	1			
Asbestos related diseases				
Asbestosis	14	2	2	2
Lung cancer	2			
Talcosis	1			
Other pneumoconiosis	52 (2)	9 (1)	8	11
Byssinosis	1			
(Subtotal)	71 (2)	11 (1)	10	13
Total	106 (8)	15 (1)	11	15

* Number of females are indicated in the parenthesis.

Figure

