

GUEST EDITORIAL

OCCUPATIONAL DISEASES IN MALAYSIA: THE NEED FOR BETTER NOTIFICATION

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Since the enactment of the Factories and Machinery Act of 1967¹, it has been the legal requirement of medical practitioners in Malaysia to report all cases of notifiable industrial diseases in factory workers to the employers. The factory owners (termed as the occupiers) are then, in turn, required to report such cases to the Chief Inspector of the Factories and Machinery Department within 14 days of receipt of any notification. The Act was amended in 1978, whereby such cases are now to be notified by medical practitioners directly to the Chief Inspector as well as to the factory owners. The objective of the amendment was to hopefully improve the notification of cases of industrial disease, which has been poor since 1967. However, to date, only one case of industrial disease (viz lead poisoning) has been reported to the Factories Department.² Since it is the legal and moral obligation of the examining doctor to bring such cases of industrial disease to the notice of the government as well as the management, this situation needs to be examined and rectified urgently.

NOTIFIABLE INDUSTRIAL DISEASES IN MALAYSIA

The list of notifiable industrial diseases in Malaysia is given in the Third Schedule of the Factories and Machinery Act (1967). This is shown in Table I.

Table II shows the occupational diseases and

conditions that have been previously surveyed in Malaysia. Silicosis has been found to be prevalent in 25 percent of government quarry workers, with the majority of cases occurring after more than 10 years exposure.³ Five percent of the cases were also associated with pulmonary tuberculosis. A study by Singh and Jorgensen⁴ found that 36 percent of Chinese tombstone makers were suffering from silicosis. Most of these cases were workers with more than 15 years of exposure. There was again a strong association with pulmonary tuberculosis, with a prevalence rate three times that of the general population.

Lead poisoning has also been shown to occur in workers of a battery manufacturing factory.⁵ Seventy-six percent of the subjects were found to have excessively high blood lead levels (120 µg/100 ml and above), while 37.3 percent were observed to have high urinary d-aminolaevulinic acid concentrations (40 Mg/l and above). The common signs and symptoms in these subjects included pallor, Burton's lead line, metallic taste in the mouth, abdominal colic and constipation.

The health effects of occupational exposure to paraquat has also been studied in Malaysian spray workers.^{6,7,8} However, these studies showed that there were no significant harmful effects on health from the spray concentrations used, although there were some instances of skin irritation or rashes associated with spraying.

A survey for leptospiral (Sensitized-Erythrocyte-

TABLE I

NOTIFIABLE INDUSTRIAL DISEASES (SECTION 32, FACTORIES AND MACHINERY ACT, 1967)

1. Dust diseases of the lungs:
 - (i) Silicosis - inhalation of (SiO₂) silica containing dust.
 - (ii) Stannosis - inhalation of tin dusts or fumes.
 - (iii) Siderosis or sidero-silicosis inhalation of dust containing iron and silica, haematite.
 - (iv) Asbestosis - inhalation of asbestos dust or fibres.
 - (v) Conditions of respiratory allergy of asthma or chronic bronchitis, or byssinosis resulting from inhalation of dusts of plant origin as cotton, wood, flax, jute, rice husks, cork, spices, hemp, sisal, tobacco, tea, flour and the like and mineral dusts as cements, copper, zinc, or animal dusts as bone or hair.
 - (vi) Other pneumoconioses or fibrotic diseases of the lungs resulting from inhalation of aluminium or talc, or coal.
2. Systematic intoxication by any of the following metals or their compounds, Lead, Mercury, Manganese, Phosphorous, Antimony, Chromium, Nickel, Beryllium.
3. Intoxication resulting from the use of solvents as Benzene and other aromatic hydrocarbons, Carbon disulphide, Chlorinated hydrocarbons, and Petroleum and its derivatives.
4. Pulmonary irritation resulting from inhalation of Nitrogen oxides, Sulphur oxides, Chlorine, Phosgene, Ammonia, etc.
5. Intoxication resulting from handling of insecticides, or herbicides or fungicides as organic phosphate compounds, nitrogenous and chlorinated compounds.
6. Conditions of Occupational dermatosis resulting from handling of mineral oils, acids, alkalis, dusts, and other irritants.
7. Occupational infections as anthrax, glanders, and leptospirosis tuberculosis, leprosy (where occupational exposure to the last is evident).
8. Malignant disease resulting from handling or inhalation or contact with carcinogenic tars, or radioactive dusts.
9. Eye conditions resulting from physical trauma as heat cataract, radiation cataract and from irritants.
10. Toxic jaundice resulting from nitro or amino derivatives of benzene or other substances.
11. Subcutaneous or acute bursitis of knee or hand or wrist resulting from manual labour causing severe or prolonged friction or pressure.
12. Conditions resulting from severe heat exposure such as heat cramps or heat stroke.
13. Hearing loss due to excessive exposure to industrial noise of high sound pressure level.
14. Conditions resulting from exposure to ionizing and non-ionizing radiation.
15. Decompression sickness (Caisson disease) and conditions resulting from working under water.

Lysis) antibodies was carried out by Tan ⁹ on 18 occupational groups in West Malaysia. The highest antibody rates were found among oil palm estate workers (32.6 percent), hospital staff (25.5 percent) and rubber estate workers (23.2 percent). Relatively high rates were also observed in town cleaning labourers (17.9 percent), Armed Forces personnel (17.2 percent) and tin-miners (16.4 percent).

Ultra-violet flash burns of the eye were found to occur among welders using acetylene and oxyacetylene torches. ¹⁰ Another occupational eye disease surveyed in Malaysia was keratitis nummularis (padi-planters' keratitis), a form of kerato-conjunctivitis resulting in coin-shaped corneal scars which occurs commonly among rice-field workers. ¹¹

Exposure of neurosurgeons and medical officers

TABLE II
OCCUPATIONAL DISEASES AND CONDITIONS
SURVEYED IN MALAYSIA

Disease or condition	Occupation at risk
Silicosis, silico-tuberculosis	Quarry workers
	Tombstone workers
Lead poisoning	Battery workers
Paraquat poisoning	Spray workers
Leptospirosis	Oil palm estate workers
	Hospital staff
	Rubber estate workers
	Town cleaning labourers
	Armed Forces
Arc eye (ultraviolet flash burn)	Welders using oxyacetylene torches
Keratitis nummularis (Padi-planters' keratitis)	Padi-planters
Radiation	Neuro surgeons (during cerebral angiography)
Nitrous oxide/Halothane anaesthetic intoxication	Anaesthesiologists

to X-Ray radiation during cerebral angiography has also been studied.¹² The results showed that their radiation exposure doses were below the Maximum Permissible Doses recommended by the International Commission on Radiation Protection. The occupational hazards of anaesthesiologists in Malaysia were also surveyed by Delilkan,¹³ who found that the incidence of spontaneous abortions was more common in female anaesthesiologists and the wives of male anaesthesiologists after commencing anaesthetic practice, compared with the incidence before commencing practice. He also found that there was a high incidence of headache, irritability and insomnia, particularly related to the use of the nitrous oxide/oxygen/halothane or Magill circuit.

Table III shows the number of cases of occupational disease which have been admitted to a major hospital in Kuala Lumpur from 1972 to 1979. Thirteen cases of confirmed occupational disease were seen during the eight-year period. There were five cases of leptospirosis, two cases of lead poisoning, five cases of chemical pneumonitis due to chlorine inhalation, and one case of carbon monoxide poisoning. Out of the thirteen cases, only one case of lead poisoning was notified to the Factories and Machinery Department.

NEED FOR NOTIFICATION

Although this discussion is not an exhaustive

TABLE III
CASES OF OCCUPATIONAL DISEASES ADMITTED TO
A MAJOR HOSPITAL IN KUALA LUMPUR, 1972-79

Industrial Disease	Occupation	No. of cases
Leptospirosis	Rubber estate workers	2
	Forestry workers	2
	Armed Forces	1
Lead poisoning	Printing industry worker	1
	Battery factory worker	1
Chemical pneumonitis due to chlorine gas inhalation	Chemical plant worker	5
Carbon monoxide poisoning	Chemical plant worker	1
T O T A L		13

review, it does however provide conclusive evidence of the occurrence of many occupational diseases in the country. The gross under-notification of industrial diseases by medical practitioners has probably resulted from a combination of various reasons: (i) the doctor's lack of awareness of their legal obligation to notify industrial diseases under the Factories and Machinery Act, 1967, whereby those failing to do so may be prosecuted in court and fined up to \$2000; (ii) the difficulties in diagnosing cases of industrial disease due to lack of training or knowledge of occupational medicine; (iii) the doctors' contractual obligation to the employers in terms of medical confidentiality and (iv) the fear of the termination of employment or contracts by the factory management. However, it is also the moral obligation of the doctors to the workers that they notify industrial diseases because only when such cases are brought to light, can the proper preventive and control measures be implemented. In addition, workers are entitled to financial and social compensation should they suffer from morbidity or disability resulting from diseases at work. The management should also be convinced of the advantages of notification because the company stands to gain through higher productivity and less sickness absence in the long run if the health of their employees is maintained.

With the need for better notification of industrial diseases, the Occupational Health Unit of the

Ministry of Health will have an important role to play in providing consultatory and advisory services for factory doctors in diagnosing and controlling occupational diseases. The improvement of notification of industrial diseases will thus be a major step in promoting the occupational health of workers in the country.

REFERENCES

- ¹ Government of Malaysia. Factories and Machinery Act, 1967. Government Printing Department, Kuala Lumpur, 1967.
- ² Ministry of Labour and Manpower, Malaysia. Annual Report of the Factories Department, 1980.
- ³ Singh A. The prevalence of silicosis among granite quarry workers of the government sector in Peninsular Malaysia. *Med J Malaysia* 1977; 31, 277-280.
- ⁴ Singh A, Jorgensen H S. The prevalence of silicosis among Chinese tombstone makers in Malaysia. *Med J Malaysia* 1978; 32, 294-296.
- ⁵ Wan K C, Abu Bakar J, Abu Bakar C M. A study on occupational exposure to inorganic lead at a battery manufacturing factory in Petaling Jaya. Report on Working Conditions and Environment in Factories, Factories and Machinery Department, Malaysia, 1976.
- ⁶ Howard J K. A clinical survey of paraquat formulation workers. *Br J Ind Med* 1979; 36, 220-223.
- ⁷ Howard J K, Sabapathy N N, Whitehead P A. A study of the health of Malaysian plantation workers with particular reference to paraquat spraymen. *Br J Ind Med* 1981; 38, 110-116.
- ⁸ Swan A A B. Exposure of spray operators to paraquat. *Br J Ind Med* 1969; 26, 322-329.
- ⁹ Tan S K. Occupational distribution of leptospiral (SEL) antibodies in West Malaysia. *Med J Malaysia* 1973; 27, 253-257.
- ¹¹ Wong P L. Keratitis nummularis among rice cultivators. *Med J Malaysia* 1968; 22, 313-322.
- ¹⁰ Chandran S, Ooi E S. A survey of ocular injuries at the University Hospital. *Med J Malaysia* 1971; 25, 278-281.
- ¹² Lam E S. Personnel exposure during cerebral angiography. *Med J Malaysia* 1979; 34, 171-173.
- ¹³ Delilkan A E. Incidence of known possible occupational hazards to anaesthesiologists - A retrospective survey among anaesthesiologists in Malaysia. *Med J Malaysia* 1976; 31, 100-103.