

## Administrative and judicial control of the hand-arm vibration syndrome in Japan

by Tomio Fukui

FUKUI T. Administrative and judicial control of the hand-arm vibration syndrome in Japan. *Scand J Work Environ Health* 12 (1986) 400–401. The article reviews the administrative and judicial stand on the hand-arm vibration syndrome in Japan and the controversy that has accompanied the topic over the years. As an occupational disease, caused by vibrating tools, the syndrome has officially evolved from a vague entity comprised of neuritis and relevant diseases to that of a peripheral circulatory or neurological or motor-organ disorder involving the fingers, hands, forearms, etc. However, even though patients suffering from vibration disease today receive substantial benefits, there has been much controversy about the extent of responsibility that should be assumed by the employer. This controversy is illustrated by a recent court case in which the plaintiffs, patients with vibration disease, first won considerable compensation from their employer, only to have the case overturned in a higher court ruling. It is urged that acceptable international guidelines and criteria be established for the legal control, treatment, and prevention of the hand-arm vibration syndrome.

*Key terms:* forestry work, legislation, vibration-induced white finger.

In Japan, although many types or designs of vibrating tools have been widely used in industry since the early part of this century, little attention was paid to the resulting hand-arm vibration syndrome until the middle of the 1960s in both private and public sectors.

From about the middle of the 1950s chain saws were gradually introduced for lumber cutting in the national forestry work of Japan. The occurrence of the signs and symptoms of vibration-induced white finger (VWF) among the chain-saw operators was being reported within a few years after the introduction of chain saws to forestry operations.

The labor union of the national forestry workers, which is called the "All Forestry Workers Labor Union," was particularly critical of the national forestry authorities on many issues. They took the occurrence of VWF in forestry workers very seriously and demanded that the authorities prevent VWF completely.

In order to achieve this objective, around 1965, the Union staged a powerful public campaign with enthusiastic support from mass media, public health physicians, and others. As a result VWF was quickly publicized and perceived generally as a very serious occupational hazard. Both the administrative and judicial authorities reacted quickly and required industries to take very thorough preventive measures against VWF. This action seemed to place an unusually heavy burden upon industry. However, as the Union's drive, as well as the general public reaction, were not fully supported by objective and scientific investiga-

tion, criticism of the Union's action and administrative handling of VWF is now emerging.

### Handling of vibration disease by the administration

In the enforcement regulation of the Japanese Labor Standards Law, there is a number of diseases, including vibration disease, listed as prescribed occupational diseases. In the list set up in 1947, vibration disease was described vaguely as neuritis and relevant diseases to be caused by the use of rock drills, rivet guns, etc.

In the amended list of 1978 which seems to have been influenced by the VWF campaign, the aforementioned prescription of vibration disease was changed and has since been described as a peripheral circulatory or neurological or motor organ disorder involving fingers, hands, forearms etc, caused by the use of rock drills, rivet guns, chain saws, etc. Under these definitions and other supplemental criteria for diagnosis of the disease issued by the Ministry of Labor, workers who meet these prescriptions are officially recognized as occupational disease patients by the government authorities. On the other hand, under the law, there is a mandatory insurance scheme to cover occupational diseases. The cost of such insurance is borne by employers, and workers recognized as occupational disease patients are given quite substantial insurance benefits. Almost all medicare expenses, as well as compensation for a permanent disability, are paid by the insurance. Sixty percent of the average wage is paid for the period during which workers are absent from work due to such diseases. Moreover, as long as the disease continues, workers are basically not discharged by the employer.

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In addition to the aforementioned official benefits, many employers establish their own programs under which workers recognized as occupational disease patients are given additional benefits. In the case of national forestry workers, they are almost fully paid for their absence from work due to the disease.

### **Dramatic increase of vibration disease patients**

Despite the existence of the official occupational disease listing of vibration disease, until 1965 only about ten workers a year were recognized by the authorities as occupational vibration disease patients.

As was mentioned before, around 1965, a strong campaign explaining to the public the seriousness of the so-called "white wax fingers" was mounted by the Union, and a special television program under the title of "White Wax Hands" was broadcast through the national television network. Thereafter, the Ministry of Labor, as well as the Personnel Agency of the government, issued guidelines on several occasions according to which workers of both private and public sectors, using various kinds of vibrating tools, including chain saws, could become more readily recognized as victims of vibration disease. As a result, the number of officially recognized patients with vibration disease has dramatically increased every year by about 2 000, recently reaching a total of more than 15 000.

### **Court judgement on hand-arm vibration syndrome cases**

Workers who were not satisfied with the benefits given under the administrative insurance scheme have filed a number of lawsuits against their employers claiming monetary compensation for their pain and suffering caused by vibration disease. To date a case involving 12 previous chain-saw workers of the National Forestry Agency was decided in July 1977 at the trial court level and, upon appeal, in September 1984 at the appellate court level.

In the trial court judgement, which was heavily influenced by the view of the Soviet physician Andreeva Galanina, many symptoms claimed by the plaintiffs were held to be attributable to vibration exposure. Thus most of the 12 plaintiffs (eight were over 60 years of age) were found to have damage due to vibration, not only of peripheral nerves and blood vessels, but also of muscles, tendons, elbows, and shoulder joints. Moreover, subjective complaints such as headache, irritability, sweating, and impotency were also attributed to vibration exposure. Thus all plaintiffs, but one, were classified as patients with severe stages of vibration disease. Several of them were found to require hospitalization for treatment.

The judgement also held that the Forestry Agency was negligent for the following reasons: (i) before introducing chain saws, it did not conduct a thorough

investigation into the effect of chain saws on the human body and confirm their safety; (ii) soon after the general introduction of chain saws, despite the complaints of VWF made by several workers to their supervisor and despite the fact that a questionnaire survey conducted by a research laboratory of the Forestry Agency revealed the occurrence of white fingers among chain-saw workers, the Agency did not pay much attention to such facts; (iii) the Agency did not stop workers from using chain saws even after they developed VWF; and (iv) until 1969 the Agency did not implement the 2-h time restriction for the use of chain saws which had been strongly demanded by the Union.

On appeal, the appellate court completely reversed the trial court judgement and dismissed all claims made by the workers. As for the nature of the disease the court stated that vibration disease seems to cause damage only to peripheral vascular, nerve, and motor functions. The court did not agree with the plaintiffs' allegation that the disease causes damage in whole-body organs, including the central nervous system. It was also stated that almost all the energy of vibration caused by chain saws is absorbed in the hands and is not transmitted to the whole body. The judgement went on saying that, since the industrial revolution, many kinds of new machinery, such as rapid transportation machinery, have been developed which on the one hand alleviate men's hard labor and make people's living more convenient but on the other hand cause various occupational diseases; under the circumstances, if employers were always held responsible for non-serious occupational diseases developing after a long period of use, the result would not be considered reasonable, since such a judgement would in the long run discourage developments which are for the increased convenience of people's living.

The decision applied a stage system, which was largely influenced by the Taylor-Pelmeur system of grading, to assess the severity of the plaintiffs' disease. Almost all of them were either at the level of stage 1 or 2.

In conclusion it decided that the Forestry Agency was not obligated to pay the claimed compensation on top of the usual compensation paid under the occupational accident compensation insurance system.

### **Conclusion**

It is unfortunate that the views of the medical experts are so widely divergent on both the nature and severity of the hand-arm vibration syndrome. Legal authorities, having little knowledge of the medicine involved, have to decide legal issues. In order to lessen the heavy burden upon the legal profession and to avoid unnecessary confrontation between the parties concerned, the medical profession is urged to develop internationally acceptable guidelines and criteria which should be applied in the legal control, the treatment, and the prevention of the hand-arm vibration syndrome.