

Electro Cardio Graphies (After 50 Years) of Yusho Victims Who Are Left Behind

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Introduction

Almost 50years ago, a strange disease (called afterward Yusho⁽¹⁾) had occurred involving so many people. At first the disease spread in large cities in Fukuoka prefecture in Kyusyu Japan (Fukuoka, Ohmuta, Kitakyuusyu-city).

Soon the cause of disease was clarified. Toxic rice oil was made by Kanemi Sohko. In Fukuoka city some effort to pursuit the way from dealers to consumers was done, but it was unfeasible because the toxic oil was sold not only for specified consumers, but for business purpose (restaurants, bakeries, a pharmacy used for drugs) and for unspecified persons who bought the toxic oil from super-market. So it has been left alone affected cutomers of such restaurants.

Public Health Bureau in Kitakyusyu City inspected Kanemi Sohko and advised⁽²⁾ them to suspend the shipment of suspicious oil. In spite of this, Kanemi Sohko had not stop shipping the toxic oil over western Japan for they convinced the safety of this toxic oil. After refining the oil (this had made circumstances more worse, because the refining process was the cause of toxicant oil and consequently added more toxins. In Nagasaki prefecture, which has the highest number of islands in Japan, so much toxic oil (after refining the second process) had shipped.

In 2004 Goto Citizen's Organization had requested Nagasaki Prefecture to release data on sales channel and performance of Kanemi Sohko 1968, by a public information fact. The amount of toxic oil was 2984.6 canned oil (18.03 l/can). It has been revealed that the toxic oil had been sold greater part of Nagasaki prefecture Kanemi Sohko had shipped to Naru island (belong to Lower Goto archipelago) exceptionally large amount of toxic oil i.e.161canned oil(18.03L/can). In 1968 the population of Naru cho was 7088⁽³⁾.That came to an average of 409.5 ml (0.37 mg 2,3,7,8-TCDD TEQ) toxic oil per resident of Naru cho.

In another Lower Goto archipelago Fukue island consists of one city and 4villages. Kanemi Sohko had shipped for one city and 2 villages; Fukue city (61canned oil), Tomie cho (10 canned oil), Tamanoura cho (50 canned oil). Among them in Tamanoura cho the dealer sold large amount of toxic oil for inhabitants. That came to an average of 192.5ml (0.17mg 2,3,7,8-TCDD TEQ) toxic oil per resident of Tamanoura. Whereas in 2013only 3% of Naru residents and 14% of Tamanoura residents in 1970 are admitted as Certified Yusho

Naru island is an isolate island and at that time many people had not been informed the toxic rice oil they had bought. The oil had been sold by a rice wholesale dealer of Nagasaki to 12 rice dealers in Naru

island, and each store had sold rice oil at their shop or a store on wheels.

Turning now to the Criteria for certified Yusho. At first the criteria were mainly confined to dermal syndrome. The toxicity of Kanemi rice oil had proved to be PCB in 1968⁽⁴⁾ and PCDFs in 1975⁽⁵⁾. PCDFs were detected in tissues of Yusho patients in 1977. In 2004 new criteria⁽⁶⁾ for admitted Yusho were adopted (blood levels of PCDFs and dl-PCBs (dioxin like PCBs)). The blood levels were measured after 36 years or more. These criteria have a serious defect. In Japan there were no blood conservation of those days (gathered in 1968). These criteria have been applied only blood levels of these days between 2004 and 2017 (more than 36 years after). In 2012 new criteria⁽⁷⁾ were decided: In 2012, those who have certified Yusho as a family member are approved as a Yusho, except those children born after 1969. To have “objective data” to decide Yusho, Yusho Group adopt the blood level of PCDFs value to decide a certified Yusho. But recent blood level of PCDF may have changed from that of 49 years ago by the life-style (eating vegetables, fasting, perspiring, exercise, some kinds of medicine etc.). In Naru cho large majority of men were engaged in fishery and agriculture. They were manual laborers.

Materials and Methods

In response to the request of un-certified Yusho's Organization, medical practitioner's group were organized. The members were internal medicinists, psychiatrist, gynecologist, dentists, laboratory technicians who have technical skills for ultrasonography, nurses, and members of the secretariat. The purpose of this organization is to clarify the clinical Yusho with medical examinations.

This time we planned to examine the health status of inhabitants of Naru Island. As stated above, in this island many people have gone through life without the information of their Kanemi rice oil poisoning.

We had examined 40 people (age from 46y.o to 88y.o, 22men, 18 women,) who had eaten toxic oil or born after the accident. We had examined blood pressure, electrocardiogram, ultrasound study, physical and neurological examinations. As ultrasound study we had reported some of these studies in 2017 Dioxin Conference.

We report here mainly of electrocardiographic examinations. We have had interviews with 51 uncertified Yusho cases including their family beforehand and had noticed of no small numbers of sudden death and death due to cardiac diseases.

Results and Discussions

Electro-cardiograms of these group showed abnormal 11 cases out of 40 (27.5%) examinee. These findings include various kinds of abnormality that need more detailed investigation. They are AF (atrial fibrillation), LVH (left ventricular hypertrophy), IVCD (intra ventricular conductive delay), inverted T wave (in cases suggesting cardiac infarction), low voltage, small Q, sinus block and their duplication.

We have paid attention to the number of RBBB (right branch bundle block, complete and in-complete). 10 cases out of 40 showed 9 RBBB (8 CRBBB and 1 incomplete RBBB) and 1 LAHB (left anterior hemi block). 3 cases out of 9 RBBB had experienced heart failure, and 2 of them had been underwent a CABG (coronary artery bypass graft) surgery.

