The Morinaga Milk Arsenic Poisoning Incident: 50 Years On

A report outlining the Implementation Status of the Victims Relief Project

Volunteers in support of the complete implementation of a permanent control strategy

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Preface

Fifty years has passed since the occurrence of arsenic poisoning caused by Morinaga Milk Company (hereafter known as Morinaga). Most victims of this incident except for a few were newborn babies. According to the report released by the ministry of Welfare at the end of 1955, the number of individuals affected was 11,778 and a further 113 had died. One of the most notable characteristics of the Morinaga milk incident is the large number of people from the same age group who fell victim to the poison. It is very rare for a single incident to impact such a large number of people as this one did. In 2011 the victims of the Morinaga milk incident will be turning 50 or 51 years old. It was the summer of 1955 when the powdered milk produced at the Morinaga factory in Tokushima was shipped to nearby prefectures in western Japan. The factory's location in Tokushima is the reason that the majority of poisoning victims were concentrated in the western region of the country.

The infants and babies affected by the poisoning were unable to communicate which made it difficult to isolate a reason for their illness. This, in turn, caused the damage to spread. As milk in an essential part of an infant's diet, consumers, particularly mothers, did not suspect it was causing the illness and therefore continued to feed the powdered milk to their children. If they had been only a little bit older, they could have told their mothers, "Mommy, when you give me the milk I always get a stomach ache," but instead all they could do was cry. Their tears were most likely caused by the pain and discomfort from the poisoning. In fact, it was reported that babies who were fed the poisoned milk cried louder than usual during the night.

Fifty years has passed since these events occurred. Many of the victims' parents have passed away or become very old. Their eternal love for their children was the driving force behind the permanent control strategy, which was developed over a twelve-month period, thirty-one years ago. We have named our victims relief association the "Hikari association". "Hikari" is the Japanese word for "shine" and it is the families' wish that when this strategy's implementation is complete, a light will be able to "shine" on the victims of these terrible events.

The victims' relief project and permanent control strategy by the Hikari association are insufficient and have been ignored so far. In the interest of the victims and their families affected by the Morinaga milk incident, all our efforts are required for this strategy to be effectively implemented. We would like to inspect the current status of this strategy's implementation and increase public awareness of the lack of action taken thus far. We have been considering the reasons that some items are yet to be implemented and will endeavor to base our inspection on concrete evidence.

We hope that publishing this report will help the permanent control strategy to proceed further.

1. Outline of the incident

At the end of June in 1955, a strange illness spread among bottle-fed children in the western part of Japan. According to their mothers, those children started suffering from fever and diarrhea without showing any other symptoms beforehand. They were also throwing up the milk that was fed to them and doctors were not able to identify a specific reason for their sickness.

It was on August 10th when this illness was reported for the first time, appearing in Okayama's Sanyo newspaper. The writer of the article, Mr. K, was himself a parent with an 8-month-old daughter. The newspaper headline read "Babies affected by the summer heat; Many occurrences in the southern part of Okayama prefecture. Some serious cases with anemia." The article went on, "Due to the continuous heat during summer, babies, particularly in the southern part of Okayama prefecture are suffering from anemia. This has resulted in some infants in a critical condition in Okayama University Hospital and Okayama Red Cross General Hospital in the past week. Extreme cases are exhibiting symptoms similar to those of leukemia sufferers. In these instances patients have lost up to a quarter of their blood and have required treatments such as blood-forming medicine or blood transfusions."

Mr. K had been covering Okayama Red Cross General Hospital at the time and was told by one of the nurses that "a 'black' baby has been coming for examinations recently". He became curious and enquired about this to the head doctor, to which the response was "I think it is Molinia. Some antibiotic medicines, such as penicillin, cause the whole body to become moldy and the skin to turn black."

At the time of the first report, Mr. K's brother and 10-month-old niece were visiting from Tokyo. Both Mr. K's own daughter and his niece were bottle-fed babies who had consumed Morinaga powdered milk. Soon after they were fed the milk, they started suffering from diarrhea. When they were presented at Okayama Red Cross General Hospital, their doctor said "You do not have to worry, but stop using the Morinaga powdered milk and change to one from another company."

It was not until twelve days later, on August 24th that the powdered milk produced by the Morinaga Milk Company was found to be mixed with arsenic.

Mr. K's daughter and niece recovered as soon as they stopped consuming Morinaga powdered milk. Mr. K started to wonder about this incident and frequent Okayama Red Cross General Hospital. On August 19th, he found the letter "M" on the records of 16 patients who had been hospitalized there. It turned out that all those who had been marked with an "M" were patients who had consumed Morinaga powdered milk.

Mr. K wrote a draft article which was due to be printed on the morning of August 10th. Its content included a reference to "infants who had been fed Morinaga powdered milk" but this draft was not published in the morning edition, rather it appeared later that day, in the evening edition. Moreover, during the editing process "fed Morinaga powdered milk" was changed to "bottle-fed". It is claimed that this change was made "for a reason ordered by the company", according to Mr. K's memoranda from 'Pursue a "strange illness"' in *20 years History of the Fight against Arsenic Poisoning by Morinaga.*

It had been clear "since around August 5th" that something was wrong with Morinaga powdered milk products. In the publication, *A Report on the Occurrence of Arsenic Poisoning by Powdered Milk in Okayama Prefecture*, a diary entry written by Dr. Eiji Hamamoto, pediatrics professor in the Okayama University medical department, makes reference to this date.

All of the pediatricians at Okayama Red Cross General Hospital were pupils of Dr. Hamamoto and some doctors from Okayama University Hospital had sought help there. This meant information about the recent events reached both hospitals immediately. This begs the question, what if they had announced the danger of Morinaga powdered milk in early August when it was first detected? Furthermore, had they made an announced on August 12th when Mr.K presented his baby, the damage would have been significantly less. Instead, the announcement was postponed until August 24th, when arsenic was found in the Morinaga powdered milk products tested at the forensic medicine laboratory within Okayama University medical department.

On August 24th 1955, this incident was given extensive coverage in every newspaper. The Asahi newspaper headline read “Strange illness occurring in bottle-fed babies. Three dead in Okayama”, however, the word “Morinaga” did still not appear in the headline of Okayama’s Sanyo newspaper. As a result of this, readers were not aware that consumption of Morinaga powdered milk was the cause of illness unless they read the whole body of the article. It was assumed by many that the issue was common to all bottle-fed babies. Numerous mothers who became upset by the article rushed to hospital and lined up outside in spite of the hot weather to present their babies. Out of 197 bottle-fed babies who were presented to Okayama University Hospital on August 25th, 94 were found to be suffering arsenic poisoning from Morinaga powdered milk.

In Okayama Red Cross General Hospital there was not enough room for all the patients so some were forced to occupy beds in the halls. A newspaper article on August 25th reported the number of patients in Okayama prefecture to be 216, and more than 100 in each prefecture of Kinki, Chugoku, Shikoku regions. In Okayama, five patients had officially died from the poisoning and even more deaths were estimated. It was reported that patients were showing symptoms of high fever, diarrhea, darkened skin, and their abdomens had swollen up. The following day, the number of patients nationwide reached 1463, and 23 were dead.

The medicine used to treat the arsenic poisoning was British anti-Lewisite (BAL). BAL was originally discovered in the United Kingdom during the Second World War as an antidote for arsenic gas used in combat. Who could ever have imagined that such a virulent poison was being mixed with powdered milk designed for babies? The information about why arsenic was present in the powdered milk was the cause of much confusion. Arsenic had only been found in a powdered milk product called “MF Can” which was produced at a factory in Tokushima. While thirteen of the elements added to the powdered milk were taken to Okayama University medical department for examination, no trace of arsenic was detected in any of them.

It was actually the Morinaga factory in Tokushima who announced that arsenic had been found in sodium phosphate, a chemical being used as a stabilizer. The stabilizer had not been sent for examination so all of the tests performed during the investigation had

effectively been done so in vain.

It had not been known to anybody but producers that a stabilizer was being used in the powdered milk. At the time, there were no refrigerated tanker trucks for transportation, so the milk was becoming oxidized on the long trip from the farm to the factory. The quality of the milk used was a major factor. If milk of low quality is used for powdered milk products, it is difficult to dissolve in water for consumption. This problem does not occur if good quality milk is used. In the case of Morinaga, the milk being used was almost rotten therefore they needed to add sodium phosphate as a stabilizer. According to the press release by Morinaga, they had been using this stabilizer since 1952.

Sodium phosphate can be classified into three grades of purity, known as reagents, these are: the first reagent, the second reagent, and the grade suitable for industrial use. Believe it or not, the type of sodium phosphate that Morinaga had been adding to their milk was the one for industrial use, which is more commonly used as an insecticide or for cleaning boilers. In fact, during the time in question, the scales at the factory were broken so the stabilizer was not measured before being added. This is why the amount of arsenic found in each product was different depending on the date of production and lot number.

The sodium phosphate in which the arsenic was found was actually produced from industrial waste. This particular waste was generated during the process of refining bauxite into aluminum at the Nippon Light Metal Company, Ltd. factory in Shimizu. It was first delivered to Japanese National Railways (currently JR) but was returned due to the presence of arsenic.

This sodium phosphate was delivered to Morinaga factory in Tokushima after being rejected by many medicine companies. The Nippon Light Metal Company made an inquiry to the Ministry of Welfare via Shizuoka Prefectural Sanitation as to whether this “medicine” would constitute as a poison, in accordance with the “Poisonous and Deleterious Substances Control Law” of November 1954. They did not receive an answer from the Ministry of Welfare until November 1955, the following year. If their response had been completed much earlier, this incident would never have occurred.
Aside from these details, it is needless to say that all producers have a responsibility to

their customers when it comes to product quality. Including components that are best used for cleaning trains, as demonstrated by Morinaga, is nothing short of irresponsible and dangerous.

Nothing can excuse the actions of Morinaga. It is clear that they neglected both their duty of care as well as and security practices, which in turn lead to this incident.

In contrast, once the investigation was underway Morinaga insisted in criminal court that they had been “deceived by the medical company”. Morinaga claimed to have thought the medicine was the same as what they had been using before, therefore did not check for quality. They claimed this was an offence by the medical company against “the principle of trust”. The response from the medical company was mixed. On one hand they accepted the fact that they had actually delivered a low quality product. On the other hand, they stated, “if Morinaga had made it clear what the medicine was to be used for, we would have delivered the proper product.” The medical company did not ask about the usage of their medicine because Morinaga wanted it to remain confidential.

The reason Morinaga chose to use low quality milk as a material was due to a sudden increase in their share of the powdered milk market. This growth was the result of an effective marketing campaign, which included a baby contest and commercials featuring well-known personalities. Their market share had exceeded 50% by 1955. The amount of milk Morinaga collected increased by 3.1 times over the period between 1950 and 1955. Morinaga had outdistanced their competitors, Yukijirushi and Meiji, by 2 times and 2.6 times respectively.

As previously mentioned, there would have been no need to use a stabilizer at all if only Morinaga had used fresh milk as a material. Although they had been advertising that Beta Dry Milk, a higher-ranking product than MF Can, was safe, it turned out not to be true according to a recent thesis. (Nakashima. T, 2005, *50 years since the case of arsenic poisoning caused by Morinaga Milk,* Vol. 3, p. 90-101).

Morinaga was found not guilty at the first trial in Tokushima district court on October 25,

1963. At a review by an appellate court in Takamatsu high court on March 31, 1966, the original decision was reversed and remanded. Following this, at a hearing in the Supreme Court, a final appeal was rejected on February 27, 1969. Eventually, it was through Tokushima district court that the head of factory production at Morinaga, Tokushima was sentenced to three years' imprisonment. Eighteen years had passed since the indictment was first issued. It was one of the top ten longest lawsuits in history.

2. Treatment for the incident

From August 27th, 1955, the families of the victims started coming together to move towards a negotiation with Morinaga. Mr. Tetsuo Okazaki wrote a leaflet containing a proposition "for an alliance of families of the Morinaga Milk arsenic poisoning victims". Mr. Okazaki's own daughter had been receiving treatment in Okayama Red Cross General Hospital. This leaflet was handed out to the family of each victim on every floor of the hospital by some victims' parents. Families agreed to the proposition as soon as they read it and eagerly expressed their support for the alliance to proceed.

The movement was reported in the newspaper the following day, which resulted in other alliances being organized in both Okayama University Hospital and Kurashiki Central Hospital. Representatives of each hospital gathered on August 31st and agreed to hold a rally on September 3rd. At the rally, an alliance of arsenic poisoning victims from Okayama prefecture was decided upon. Mr. Okazaki was selected as the first chairman. Members of this alliance visited a Morinaga resident office in Okayama and gave notice that the organization had been formed. Their proposal was that, after due consultation, Morinaga should enact an immediate response to the incident. At the group negotiation with Morinaga executives on September 6th, Morinaga ended up promising to pay only 3,000 yen to each non-hospitalized patient and 10,000 yen to each hospitalized patient to cover doctor's fees and as general compensation.

Following the establishment of these alliances, families of victims nationwide started to rally together as well. On September 19th, thirty representatives from nine prefectures gathered in Okayama city and held an inauguration meeting, the "National conference of the Morinaga Milk Incident Victims' Alliance[1]". Members of Zenkyo reported that they were suffering financial difficulty from doctor's and hospital fees and expressed concern about possible aftereffects of the poisoning. They also stated their dissatisfaction with Morinaga's insincere attitude toward the events, as well as the inequality in their reimbursements.

[1] 森永ミルク被災者同盟全国協議会, the Alliance hereafter known as "Zenkyo"

It was announced after three days of negotiation between Zenkyo and Morinaga that Morinaga would pay; 430 yen per day towards carer costs, the actual cost for commuting, and 150 yen per day for any other cost relating to commuting. They also decided to raise the payment for non-hospitalized patients by 2,000 yen and provide three cans of milk per patient as replacement for the contaminated milk they had purchased. Morinaga further responded that they would propose a tentative plan for condolence money for deceased patients.

Morinaga, however, gave notice on October 17th that further negotiations would be postponed. On October 22nd, the Ministry of Welfare announced to the media, "Morinaga has requested advice from the Ministry of Welfare about the issue of compensation for the poisoning incident. The Ministry of Welfare has advised that a neutral committee of well-informed persons be organized and that a solution to this problem be left for this group to decide." Members of the committee were Mr. Teizo Utsumi, Mr. Takeo Koyama, Ms. Shigeko Tanabe, Mr. Ryo Masaki, Mr. Tasuku Yamasaki. All five of them agreed to become members on the proviso that Morinaga would follow their decision unconditionally. Morinaga accepted this request as well.

The explanation Morinaga gave to Zenkyo was different from this official version. They claimed that, "All of the sudden a five-member committee has been organized and we were told to cease negotiations about reimbursements, condolence payments or otherwise, with Zenkyo from now on. We will not continue our negotiations". Zenkyo decided against the five-member-committee.

On December 15th, an opinion report by the committee was published. Zenkyo saw problems with the compensation amount for victims and with the question of aftereffects. It can be summarized as below.

1. Compensation for the dead 250,000 yen
2. Compensation for surviving victims 10 000 yen, regardless of seriousness
3. No consideration of aftereffects
4. Additional compensation for hospitalized patients is maximum 2,000 yen
5. The amount of compensation Morinaga has already paid is to be deducted from the figures shown above.

This conclusion demonstrates the way in which Morinaga borrowed the power of the government to authorize compensation that had already been paid. This ensured they would not have to reissue any payments following the outcome. In the committee's report, the lead up to the conclusion was around 30,000 characters long. On the other hand, in the actual conclusion, which is the most critical part, only 170 characters were used. The conclusion reads as follows:

> "These special doctors have considered all the opinions and concluded that 'there is generally no need to worry about the aftereffect of this poisoning. The symptoms which are present now are not an aftereffect of the poisoning, rather they are GENBYO[i].' We have decided not to set any other standard for compensation besides those outlined in the conclusion of Chapter 2, and in general remarks (3) of the 1st paragraph."

I wondered if there would be any criticism of this opinion report and checked some newspapers but found nothing. I thought to myself, what could be an "original illness" for mere 1 year-old baby? The content of this opinion report was the same as what Morinaga had put forward in criminal court. The intention of this report was to depict Morinaga as a victim who had been deceived by a medical company. That was what the "neutral," five-member committee was really about. The day following this announcement, a copy of the opinion report and a notice from Morinaga stating, "the content of this opinion report will be in effect immediately" were sent to each victim. The rest of the owed compensation was sent to all hospitalized and non-hospitalized patients by registered mail next day. It was very polite of them to enclose a government–printed post card as a receipt so that the victims could post it with ease. In spite of the committee's decision, Zenkyo made the following request:

- Payment of 500,000 yen as compensation for the dead
- Establishment of a regular check-up system
- Establishment of a research laboratory for arsenic poisoning
- Six years Payment of 2,000 yen per month as health management money for serious and moderately serious cases.

Zenkyo decided to boycott Morinaga if their request was refused. Morinaga responded to Zenkyo by saying that their opinion report was official and they would therefore not accept the request. They said that besides this they would create a detailed plan for regular check-ups, as well as the laboratory for arsenic poisoning. To represent their discontent with this response, Zenkyo initiated a boycott. Companies such as Japanese National Railways who were associated with many victims, cooperated with the boycott and removed Morinaga products from their supplies section. Despite this, the boycott did not spread to the general public so it ended up not causing large-scale damage to Morinaga.

Some members of Zenkyo were abused or bribed by Morinaga in a maneuver intending to split and confuse the movement. No repentance was shown by Morinaga whose actions had already led to the death of many people in what was clearly a mistake on their part.

Prior to this incident, there had been some cases of arsenic poisoning in the world but none involving children. On October 3rd, the Ministry of Welfare asked the Japan Medical Association to establish a small committee within the Society of Child Health and introduce “Standards for diagnosis”. According to “Standards for judgment of healing”:

1. Essential conditions: a) general symptoms are not seen, b) blood condition has recovered and is almost normal, c) kidney has become soft and shrunk to the size of two fingers.
2. Collateral conditions: a) if the electrocardiogram does not appear normal, continuing control is essential, b) if the state of the eyes does not appear normal, continuing control is essential, c) some pigment deposit left does not have to be considered, d) for addicts with symptoms other than those above, a decision will be made following special examination.

Most of the patients had been told they had recovered. This led to huge problems later on.

Anxious about the risk of aftereffects, members of Zenkyo persevered with the Morinaga negotiations and at the end of March 1956 also petitioned the government in order to find a solution to this situation. As a result, the government gave an official notice to each prefecture asking that they establish a closed examination system for managing aftereffects. The notice said;

> (1) Available to both hospitalized and non-hospitalized patients who are undergoing treatment
> (2) Patients who are concerned about aftereffects following convalescence should be admitted to a hospital with various departments and are advised to undergo treatment if their symptoms are a result of poisoning. All costs are to be covered by Morinaga

Around that time, Zenkyo was running out of struggle funds. Zenkyo head offices in each prefecture had been calling for compromise. Members of Zenkyo decided that they would not continue their struggle any longer. On April 9th, a compromise agreement including items (1) and (2) as mentioned above was reached between Morinaga and Zenkyo and entitled “Matters of a laboratory and further offers”. The details are as follows:

1. Morinaga will offer 30,000 yen for all deceased victims to cover the cost of a memorial service, incense and flowers for the first anniversary.
2. Morinaga will establish a public corporation to support research.
3. Morinaga will offer two cans of Beta dry milk (1 pound each) to all victims.

Parents were still worried about aftereffects. According to the questionnaire done by Okayama association in February 1956, only 18 out of 137 members answered they had recovered perfectly. Morinaga sent out a notice to all the victims saying,

> “Treatment underway at each hospital will be discontinued at the end of January. Patients who remain concerned can be examined at Okayama University Hospital pediatrics unit. If it is deemed that symptoms were caused by arsenic poisoning, patients will able to receive treatment at the expense of Morinaga.”

This meant that only a certificate from Okayama University Hospital would be accepted. Though all patients except for a few were told that they had recovered perfectly, they were still suffering from hypertrophy of kidney, anemia, skin diseases, eye diseases and diarrhea. These symptoms were considered by Morinaga to be a *GENBYO* and the fee was on the patients.

The strength of the bond between Morinaga and Okayama prefecture can be seen by the fact that first place of the Morinaga baby contest was awarded in Okayama. At a round-table discussion for “50 years history of Morinaga Milk”, a Morinaga employee spoke about how Professor Hamamoto of Okayama University Hospital had been a great help, and how Sanyo Newspaper had been very favorable, as had official institutions such as Okayama prefectural office and a state health center. Thanks to them, their marketing share had increased by over 70% where it had previously been only 20%. The extensive damage caused by the poisoning in Okayama prefecture might have be due to a cozy relationship between industries, universities, official institutions and a local newspaper company.

[i] *GENBYO*

The committee selected to make a ruling against Morinaga coined the term *GENBYO*, which literally translates as 'original illness'. It was devised to sound like a technical term but is in fact not based on any medical definition. The average person may have thought it was a reference to some kind of illness, the origin of which was the parents' genetic constitution. The reason it was not called a "hereditary disease" was that if a parent's genetic constitution became clear and turned out to have no connection with the child's illness, information would have been inconsistent.

The committee insisted that the aftereffects shown by victims were not a product of arsenic poisoning but rather symptoms of a previous illness that pertains no relation to arsenic. It was not deemed necessary to find out what "an earlier poisoning or a disease" might have been. The committee emphasized that the symptoms were not related in order to convince parents that their babies were unluckily suffering from an unidentified poison or disease. The outcome of this was that parents were forced to accept their babies' misfortune as if it was some kind of natural disaster and take responsibility for ongoing treatment.

In short, the committee intentionally misled the public into believing that poisoning aftereffects were not the result of a perpetrated crime but rather an unfortunate natural disaster.