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The following is an account of the meeting on Rongelap Island on April 4, 1974 on the day of our departure following the examinations. Our survey at Rongelap turned out successfully. However, on our arrival there was considerable discontent among the people. There had been a shortage of food for some time and the territorial ships that had come to the island had insufficient food to give to the people. The following meeting shows some of this discontent and reflects misunderstandings that still exist among some of the people concerning the medical examinations that we carry out. The Rongelap Survivors Fallout Association presented to me a list of questions and requests to be discussed at this meeting. These questions have been translated into English by Mr. Robert Harrison a peace corp man on the island. The context of the questions prompted the Marshallese medical practitioner who was with us to suggest that there had been some outside influence involved.

The following is a summary of my remarks to the people. "Friends of Rongelap. This morning I will try to answer some of the questions and requests that have been presented to our medical team by the Rongelap Fallout Survivors Association. I will attempt to answer some of the questions, but others are outside our province and will be submitted to other authorities for action. I assure you we will do everything possible to get these requests presented before these authorities at the earliest opportunity. I feel that many of your questions have stemmed from lack of understanding. I was particularly disappointed to see the statement that the people did not trust the results of our reports. I have known you for some 20 years and feel that you have always been my close friends and that you have trusted us. We have greatly regretted the injuries that have been done to you by the fallout, and have wanted to help you in every way possible. I was with [redacted] when he was sick and was very sad when he died. I felt as though I had lost a brother or a son. Doctors on our medical team are honorable men and highly esteemed. They have helped to write these reports. This includes the Trust Territory medical personnel, such as Dr. John Iaman, Dr. Ezra Riklon, Triglar, Ishoda, and others. I am willing to forgive you for doubting our reports since I know that many of you have not read these reports and even if you have, the medical language would be difficult for you to understand.

In September of 1972 there were four medical observers who accompanied our team for the survey. These included Drs. Kumatori and Izaki of Japan, Dr. Pochin from England, who is with the World Health Organization, Dr. Cole from the National Health Service. The doctors read all of our medical reports carefully and took part in the examinations. They each made separate reports to the Congress of Micronesia. Senator Borja and Congressman Balos who were with us here on the island last year told you about the results of these observers reports and that the surveys were good for the people. They requested that you continue to cooperate

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with our medical team since we were doing what was good for you. Since the Congress of Micronesia recognized that a lot of the misunderstandings were due to lack of communication between the medical team and the people, they have advocated several measures which they hope will improve this situation. We are cooperating with the Congress of Micronesia and the Trust Territory in doing this. First let me say that at the time we examine you that we try to let you know through a Marshallese practitioner or interpreter what the results of the examination are, and what treatment we recommend, if you are sick. As you know the Congress of Micronesia through their committee on Rongelap and Utirik has written a long report concerning the medical surveys. They have written a summary report of this which is being translated into Marshallese to be distributed to you. This summary will include a summary also of the medical observers reports. The Trust Territory is also preparing a booklet on the effects of fallout radiation on the Rongelap and Utirik people. This booklet is based on answers to questions that you have asked about fallout. This booklet is in preparation and will be distributed to you before long. It is also planned to have visits by the Trust Territory Health Service personnel to Rongelap and to Utirik to talk to the people about effects of radiation and answer questions.

I would like to talk now a little bit about what happened to the Japanese people who were exposed to the bomb in 1945. There were thousands and thousands of people there who were exposed to more radiation than the Rongelap people received. Many of these people died because of the large amount of radiation that they received. Children of the exposed Japanese people have been examined by the best doctors in the world to see if there was any radiation sickness that was handed down from the parents to the children. These doctors could find no evidence that there was any radiation sickness handed down from the parents. We have examined the children of the Rongelap people who were exposed and we have not seen any effects that have been handed down to your children. I am glad to be able to reassure you on this point. Some of the Japanese people have developed leukemia, a cancer of the blood. With the possible exception of Leko j we have not seen any case of death from any effect that could be related to radiation exposure in the Rongelap or Utirik people. In 1954 the same accident that affected the Rongelap people also affected 23 Japanese fishermen who were 100 miles north of Rongelap. Some of these fishermen received larger doses than did the Rongelap people. One death occurred among the fishermen but the doctors do not believe that this death was related to radiation effects. The Japanese fishermen received about one half the compensation that the Rongelap people received. At this point I would like to say that I had a great deal to do with helping get compensation for the Rongelap people in 1964, and want you to know that I am in favor of your receiving further compensation for your injuries.

I would like now to say a few words about the little bit of radiation that is left on Rongelap Island. Some of the people have been worried about radiation in the food. Some will not eat arrowroot flour because they believe that it contains "radiation poison." I would like to say

that with the exception of coconut crabs from the northern islands of the Rongelap Atoll, all foods can be eaten. Last night we all joined together in a feast of coconut crabs that were caught on the southern islands. These crabs are delicious and you can eat one a day of those caught in the southern part of the atoll. We have crabs which were taken from the northern and southern parts of Rongelap which we will take back for analysis. We hope that soon we will be able to lift the ban entirely on eating coconut crabs.

Before answering specific questions posed by the Rongelap Fallout Survivors Association, I would like to say that there are some misunderstandings which arise because we on the medical team are not familiar with the customs of the people. I hope that you will forgive us when we do something that goes against the customs. We would appreciate being told when we do this. I would like now to take the questions up, one by one. Some of them have already been answered in the discussion I have made prior to this.

1. "We request that the children of the irradiated be included in compensation that may be forthcoming from the A. E. C. We request this because we know that damage done to our bodies by the radiation may be passed on to our children through heredity. This compensation for our children is of the greatest concern to we people of Rongelap."

This question is not within our area of authority, and will be turned over to the authorities as soon as possible. Though I cannot speak for the U. S. Government I feel sure that if any radiation-connected disability should arise in any of the children, which was inherited from exposed parents, they would be given due compensation.

2. "We request that the United States hasten to complete their arrangements with the Congress of Micronesia and be quick to pay the money you owe us for having damaged our islands."

This question is also out of the realm of our authority and will be passed on to the proper authorities.

3. "We request that the A. E. C. and the B. N. L. team pay the same respect to the people of Rongelap that the people pay to them. We submit that one way to do this would be to fulfill all of our requests with great haste."

We will pass these requests on to the proper authorities as soon as possible.

4. "We request that the B. N. L. team serve rice, bread, and meat at the time of the examinations instead of the proposed cookies and coffee. We request this food because the examinations and the presence of the B. N. L. team interfere with our food gathering, and food preparation to the point of halting them completely."

We had not been aware that so much time was involved in gathering food for the families. We brought with us this time a gift of food of several hundred pounds, including rice and sugar, so in view of the shortage of food on the island, we turned over the food that had been brought for the feast to the people to use more conservatively. However, in the future, in view of this request, we shall attempt to serve prepared food to the members of the families on the day that they come in for examinations.

5. "We request of the A. E. C. that the B. N. L. team be either replaced by, or accompanied by observers from the United Nations or neutral nations of the world, because we do not believe the reports of the B. N. L. team, or the reports of the English and Japanese observers who are allies of the United States."

If after reading the reports of the Congress of Micronesia and the medical observers the people of Rongelap wish to have another medical team we will cooperate fully and help the Trust Territory to bring this about. I do not believe that after reading the reports of the medical observers you will request any further medical observers to accompany the medical team.

6. "Why was Shiko's thyroid operated on, since she was not exposed? We have never heard of Marshalleas from other islands having any trouble with their thyroids."

All over the world a certain number of people have thyroid trouble which is not related to radiation exposure. This is true throughout the Marshall Islands. We visited Likiep Atoll several years ago for examination of thyroid troubles and we found that about 4 people out of every 100 had trouble with their thyroid glands. We find this is about the same number of people who have thyroid troubles in the unexposed Rongelap people. Therefore, when we find someone in the control population that needs a thyroid operation, we recommend it to be done because we are treating the control people the same as the exposed people. The special thyroid radiation or "thyroid poison" was only present on Rongelap for a few weeks after the fallout. By the time the people moved back to the Island, there was none of the thyroid poison left on the Island so none of the unexposed could have received any radiation from this poison. We do not believe the unexposed Rongelap people will get any radiation sickness from living on Rongelap since there is practically no radiation left on the island.

7. "We would like a doctor to come to Rongelap to live, so that he may treat our illness from day to day. This would be better than just coming once a year."

We will pass this request for a doctor to live on Rongelap to Dr. Iaman, Head of the Health Services of the Trust Territory in Majuro. It would be impossible for us to furnish a doctor to live on Rongelap since our doctor must take care of the Utirik people and also the Rongelap people, many of whom now live in Ebeye and Majuro.

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8. "We request that when called to Majuro or Ebeye by the B. N. L. team that the patient will receive an adequate per-diem to cover all of his living expenses during his stay."

The health bill which covers this request is now being negotiated in Washington between the Trust Territory, Department of the Interior and the AEC. I cannot comment on this further since I do not have more information.

9. "We would like to know for how much longer does the B. N. L. team plan to continue their experiments on Rongelap."

I do not know how long it will be necessary for us to carry out the examinations for the people of Rongelap. These examinations should not be called experiments. In no way have we carried out experiments on the people. We carried out only medical examinations and treatment. In 1964 before the thyroid troubles developed in the Rongelap people we found nothing of great importance wrong with the Rongelap people. At that time some people in the Marshall Islands and even some American doctors said "Why do you continue to examine the Rongelap people since you are not finding anything?" If we had stopped examining the Rongelap people at that time many people would have gotten sick from thyroid troubles that developed later, which would not have been discovered, and would not have been treated. We examine your blood twice a year to be sure that no one is developing leukemia, such as _____ died of. I would like, however, to reassure the people that it is very unlikely that any other cases of leukemia will develop since we know that we have passed the period where we would any longer expect this disease from radiation exposure. I hope you understand therefore that these examinations must continue since we can never be certain that other things may not develop in the exposed Rongelap people.

10. "We request that the A. E. C. find some way of ridding our coconut crabs of radioactivity or of replacing them with new and clean crabs, as they are a very important part of our diet."

I would like for Mr. Greenhouse to answer this question for you. (Remarks by Mr. Greenhouse: There is no way known to rid the coconut crabs of radioactivity; however, it will eventually disappear through natural processes. Also, there is no practical way to replace the radioactive crabs with clean ones since nobody could be sure that all of the radioactive crabs had been found.

The people had also expressed concern about eating other foods on the island. I would like to assure you that there is no need for concern. There are small amounts of radioactivity in all foods, even in the United States. This is due to natural radioactivity, and to world-wide fallout.

We have reason to believe from our present survey that the radioactivity in foods grown on Rongelap is not substantially different from that in the U. S. I have eaten and enjoyed the food on Rongelap, and I would not hesitate to eat it again. I feel that there is no need to worry about its safety.

We are taking coconut crab samples from the southern islands back with us for analysis in the laboratory; and we are hoping that the radioactivity will be low enough so that no restrictions will be needed. We do expect that the crabs from the northern islands will continue to be restricted.

11. "We request that the B. N. L. team send food to Rongelap with Dr. Knudsen when he comes on his quarterly trips."

Dr. Knudsen answered this question. He was willing to bring certain supplies of food to the Rongelap people on our LCU provided the payment of such food could be handled by the Marshallese directly with the coop. company at Ebeye.

12. "What new findings have you made on this April '74 survey, with the whole-body-counter, the diabetes experiment, and the other examinations?"

The special examinations that have been carried out on the Rongelap people will have to be analyzed later. The blood specimens that we have taken in studying diabetes, a blood sugar disease, in the Marshallese people, will have to be taken back to Brookhaven for analysis. Following this we will give the data on this disease to the Health Services of the Trust Territory so that they will be in a better position to treat you. The whole-body counting that we have been doing shows a very low level of activity in the people and these results also need to be further analyzed before any statements can be made. In general we found that the people were in good health and sanitation conditions on the Island were generally improved. We found no thyroid troubles on Rongelap Island that need to be treated at this time with surgery. We did find on Ebeye two exposed Rongelap people that will be taken back to Brookhaven and the United States for possible surgery. In addition there was one unexposed woman whom we feel should have a thyroid operation, and we will see if she is willing to be taken back. There were 4 Rongelap people on this Island who needed treatment at the Majuro Hospital, and we will take them back with us on the LCU to Bikini and by plane on down to Majuro.

That is all of the questions. I would like to say that we are doing everything we can to improve the examinations. We now have our own LCU which has been equipped to take care of the medical team. In this regard I have heard rumors that the people felt that we were living on the ship because we were disappointed about their using some of our fuel while we were away. This is not true. Our sleeping quarters now leak badly when it rains and we have our own sleeping facilities on the LCU. We hope to have a medical trailer which will be fully equipped as a doctor's office placed on this trailer in the near future. Having our own LCU will allow us to visit the islands at quarterly intervals on a regular basis and will

be a great help in your health care. Dr. Knudsen is going to have to return to the United States for a year beginning next fall. We hope to have another doctor to replace him by that time who will continue to visit Rongelap and Utirik." (End of remarks).

Following this there were very few questions for discussion from the people. Several people got up and thanked the medical team for all they had done for the people in the past. The only man to refuse examination got up and said he was sorry that he was not examined and now that we were willing to give him food, he would certainly be examined next year. The meeting broke up in a very friendly attitude - the people shaking hands with all members of the medical team. I cannot help but feel that we did some good in correcting some of the misunderstandings that had existed. However, I believe that the Educational Booklets and the summaries from the Congress of the Micronesia will do a great deal to help the situation. I would like to see Senator Borja's speech of last year translated into Marshallese and presented to the people also. I believe we must have more positive support from the Congress of Micronesia.

Robert A. Conard, M.D.

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THYROID LESIONS IN MARSHALLESE¹ May 1974

| <u>GROUP</u> | <u>THYROID DOSE</u> ² | <u>LESIONS</u> |
|------------------------------|----------------------------------|------------------------------|
| <u>CHILDREN</u> ³ | | |
| R (exposed in utero) | 175 + ? | 33.3 (1/3) |
| R (exposed at < age 10) | 675 - 1440 | 89.5% (17/19) (1 cancer) |
| R (exposed at < age 10-16) | 335-675 | 12.5% (1/8) |
| A (exposed in utero) | 69 + ? | 0.0 (0/1) |
| A (exposed at < age 10) | 300 - 480 | 33.3% (2/6) |
| U (exposed at < age 10) | 40 - 80 | 0.0% (0/53) |
| R (non-exposed < age 10) | 0 | 1.6% (1/61) |
| L (exposed < age 10) | 0 | 0.0% (0/31) |
| <u>ADULTS</u> | | |
| R (exposed > age 16) | 335 | 8.1% (3/37) (2 cases cancer) |
| A (exposed > age 10) | 132 | 25.0% (3/12) |
| U exposed > age 10 | 22 | 5.8% (6/104) (1 cancer) |
| R(c) (non-exposed > age 10) | 0 | 5.3% (7/133) |
| L non-exposed > age 10 | 0 | 4.7% (5/106) |

1. Stastics based on original number people.
2. Thyroid dose from I - 131 - 132 - 133 - 135 plus gamma.
3. R = Rongelap exposed to 175 rad gamma dose; A = Rongelap people on nearby island receiving 69 rad gamma dose; U = Utirik people exposed to about a /4 rad gamma dose; R(c) = Unexposed Rongelap control group; L = Likiep people on an atoll with no radiation exposure.

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THYROID LESIONS IN MARSHALLESE EXPOSED TO FALLOUT
(AS OF MAY, 1974)

| Marshall Island Group (radiation dose-gamma) | Age at Exposure | Estimated Thyroid ¹ dose-rads | Thyroid Lesions Percent ² | Thyroid Surgery | Malignant Lesions Percent ² |
|---|--------------------|--|--|--------------------|--|
| Rongelap (175 rads gamma exposure) | In-utero | 175 + ? | 33.3 (1/3) | | |
| | <10 | 675 - 1440 | 89.5 (17/19) | 15 | 5.3 (1/19) |
| | 11-16 | 335 - 675 | 12.5 (1/8) | 1 | - |
| | >16 | 335 | 8.1 (3/37) | 3 | 5.4 (2/37) |
| | all | - | 32.8 (21/64) | 17 | 4.7 (3/64) |
| Rongelap (on Ailingne Island -69 rads gamma exposure) | In-utero | 69 + ? | 0.0 (0/1) | | |
| | <10 | 300 - 480 | 33.3 (2/64) | 1 | - |
| | >16 | 132 | 16.6 (2/12) | 2 | - |
| | all | - | 22.2 (4/18) | 3 | - |
| Utirik ⁵ (14 rads gamma exposure) | <10 | 40 - 80 | 0.0 (0/53) | 0 | - |
| | >10 | 22 ⁶ | 5.8 (6/104) | 4 | 1.0 (1/104) |
| | all | - | 3.2 (5/157) | 4 | 0.6 (1/157) |
| Rongelap unexposed | <10 | - | 1.6 (1/61) | 0 | - |
| | >10 | - | 4.5 (6/133) | 2 | - |
| | all | - | 3.6 (7/194) | 2 | - |
| Likiep unexposed (1970) | <10 | - | 0.0 (0/31) | 0 | - |
| | > | - | 4.7 (5/106) | 0 | - |
| | all | - | 3.6 (5/137) | 0 | - |

¹Dose from ¹³¹I, ¹³²I, ¹³³I, ¹³⁵I plus gamma dose.

²Based on number of original people exposed. In parentheses number of cases/total number in group.

³The thyroid is considered fully developed by age 16.

⁴Difference of opinion as to whether or not one lesion was malignant. Majority opinion was that it was benign.

⁵The more energetic shorter-lived isotopes of iodine contributed less to the total thyroid dose in the Utirik people due to later fallout. One might surmise also that the biological effectiveness of the thyroid dose per rad would be less in that group.

⁶Fifteen children 10-17 years of age at exposure in this group received estimated thyroid doses between 22 and 40 rads.

⁷In addition to thyroid lesions, one case of acute myelogenous leukemia was discovered in September 1972 in a 19-year-old Rongelap boy who had received 175 rad gamma radiation at one year of age. He died November, 1972.

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