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May 20, 1954

T. L. Shipman, M. D., Health Division Leader

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EISENBUD REPORT CONCERNING JAPANESE FISHERMEN

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From your comments on the above report I gather that you do not like to have people sticking pins in your fingers. I think we realise only too well that you are not alone in this feeling and it is one which we endeavor to respect. Providing a urine specimen is certainly not umpleasant or uncomfortable, and particularly for a patient in the hospital discomfort can arise only if you don't provide it.

I am going to say that mone of us in H-Division regard Eisenbud as an individual properly qualified to pass judgment on a majority of the matters discussed in his memo. Furthermore, he is a definitely aggressive sort of person and I would not expect that he would be the sort of individual who would instill confidence in the Japanese or obtain their cheerful collaboration. I heard some weeks ago that he had returned from Japan very huffy ever the fact that he had not been allowed to see the patients. My reaction to this was "Why should they allow him to see the patients in view of the fact that he is not a physician?" The fact that Dr. Morton was likewise kept away from the patients does indicate a peculiar attitude on the part of the Japanese. It should be remembered, however, that the fishermen from the boat were distributed between three hospitals and the officials of each of these hospitals would not let doctors from any of the others visit the patients. Undoubtedly, there were comic opera overtones.

There were certain definite advantages to be gained in this situation from the study of repeated blood and urine specimens, particularly when they were grossly abnormal as was the case here. Constantly falling white count would indicate, in the first place, a grave prognosis and, in the second place, the necessity for intensive treatment. The treatment would involve repeated large transfusions and the administration of antibiotics to prevent subsequent infection. Following the level of the various blood constituents informs one as to the course and progress of the patient's illness, as well as the degree of success of the treatment provided. Unless American doctors were to be permitted to collaborate in advising treatment, I agree that it would be little if any benefit to the patients in providing blood and urine specimens to us. The Japanese physicians, however, should have needed the same information for their own purposes. I am afraid I must say, therefore, that in my opinion obtaining repeated blood counts from these men would have been of definite value both to patients and physicians (from what I have heard of the treatment which was employed, nobody gained very much). The question of studying urine specimens is a little different. As you know, we went dashing off in full cry after, hearing of the contamination of the Rongelap natives and our one

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purpose in doing this was to obtain a series of 24-hour urine specimens. We felt that this should give us confirmation of our feeling that in such situations the external exposure rather than the internal exposure is the limiting factor. A second series of such specimens is being studied at the present time. We believe that we proved our point. We also established the fact that the Rongelap natives had taken into their systems greater amounts of mixed fission products than is customarily regarded as permissible. We feel that Eisenbud was overly optimistic and probably mistaken in his letter of 6 April to Dr. Kobayashi. It is our belief that the assay carried out at NYO failed to measure total activity (they did not have adequate instruments to do this), and also failed to detect the presence of volatile fission products, principally I. 1.

Assuming an individual has already received a fairly large dose of external exposure, it is difficult to estimate to what extent this affects a concurrent internal exposure. We frankly don't know whether the two things operate independently or whether they aid and abet each other. Dr. George LeRoy of Argonne, who studied the Hiroshima and Nagasaki cases, told me this week that it was his opinion that a couple of these Japanese fishermen might die and that, in his opinion, their deaths would result from their internal exposure to mixed fission products. We in H-Division do not agree with him but I mention it to point out the fact that differences of opinion on this general subject still exist even among the well-informed.

A well done urine analysis of the Japanese fishermen such as we could have done here might have indicated the presence of large amounts of certain fission products whose excretion could have been speeded up immensely by adequate treatment. Determining whether such treatment should have been started and knowing how long and how vigorously it should be pursued would have depended on repeated urine assays, something which the Japanese were incapable of doing. This, again, would have been a specific benefit to patient and physician alike.

Much of our indecision about what constitutes adequate treatment in such cases results from the lack of adequate factual data on humans. I believe that the Rongelap natives have provided about as much scientific information as we can squeeze out of them; I am happy to report from firsthand observation that all except the babies were unbelievably cheerful and cooperative. The Japanese presumably received significantly larger doses, both external and internal. They almost certainly represent the precise dose range in which we are most keenly interested. We know that with smaller doses the people will get well anyway, and with larger doses they will die before we can do anything about it and in spite of what we can do. The Japanese received about the doses where they might die without treatment but might be saved under proper management. I only wish that we had had a number of these urine specimens to study here.

I apologize for the length of this epistle; I intended it to be terse and succinct. See what happened!

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