



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

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SEP 22 1969

Mr. Edward J. Bauser  
Executive Director  
Joint Committee on Atomic Energy  
Congress of the United States

Dear Mr. Bauser:

We wish to report the latest information concerning the medical status of the Marshallese exposed to the fallout from the March 1, 1954, test at Bikini.

Diagnoses made by Dr. Robert Conard of Brookhaven National Laboratory at his annual medical reexamination this spring prompted bringing five Marshallese and an interpreter stateside for definitive treatment. They arrived week before last, received their preoperative medical work-up at the Medical Center of Brookhaven National Laboratory, and transferred to the Cleveland Metropolitan General Hospital for surgery by Dr. Brown Dobyns.

Details of the present status of the affected Marshallese are shown in the following tabulation which recapitulates past medical thyroid disorders.

1. Young Rongelapese exposed to fallout March 1, 1954, when they were 1 to 8 years of age. (Estimated dose: 175 rads external gamma plus 600 to 1400 rem internal irradiation.)

Total - 19

- |   |          |
|---|----------|
| 1. Currently normal by clinical and biochemical tests.  | 2 (11%)  |
| 2. Currently hypothyroid with minimal nodularity. Responding satisfactorily to oral thyroid hormone therapy.  | 3 (16%)  |
| 3. Have undergone surgery in the U. S. because of nodular thyroids; histologic diagnoses of adenomatous goiter and Hürthle cell tumor. Responding satisfactorily to oral thyroid hormone therapy. | 11 (58%) |

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4. Development during the past year of nodules in the thyroid requiring definitive diagnosis and surgery.

3 (16%)

Two young adults had the primary benign adenomatous goiter essentially identical with those in I.3. above. They were treated by subtotal thyroidectomy and are recovering satisfactorily.

The third Rongelapese, a girl now 21-22 years of age, was found to have a papillary adenoma with invasion by neoplastic cells of the lymph nodes of the left side of the neck. Since the frozen sections and invasiveness suggested a serious degree of malignancy, a radical dissection of the left side of the neck plus complete thyroidectomy were carried out. The patient is recovering with a minor degree of hypoparathyroidism.

(None of six Ailinginae children exposed to an estimated external dose of 70 rads have shown thyroid dysfunction.)

- II. Surviving adult Rongelapese exposed to fallout. (Estimated dose: 175 rads external plus 160 rem internal irradiation.)

Total - 34

- |  |   |
|--|---|
| 1. Papillary carcinoma removed surgically at age 41. No recurrence. Taking oral thyroid hormone therapy.   | 1 |
| 2. Small nodule at age 40 which disappeared under oral thyroid hormone therapy.  | 1 |
| 3. This patient was exposed as an adult at the age of 22. The rough mass in one lobe of the thyroid found on physical examination proved to be an invasive adenoma involving the capsule of the thyroid. Since the lymph nodes were free of neoplastic cells only a subtotal thyroidectomy was performed. The patient is recovering satisfactorily with minimal signs of hypoparathyroidism. | 1 |

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III. Surviving adult Ailinginae people exposed to fallout.  
(Estimated dose: 70 rads external gamma irradiation.)

Total - 8

1. Adenomatous goiter removed at age 45. Recovered and was on thyroid therapy; died of influenza in 1968. 1

IV. Surviving adult Utirik people exposed to fallout.  
(Estimated dose: 14 rads external gamma plus 15 rem internal irradiation.)

Total ~ 120

1. This patient was included when she was found to have developed a nodular enlargement of the thyroid gland; she was 22 at the time of exposure. In frozen section the tissue resembled a follicular adenoma and therefore a total thyroidectomy was performed. Subsequent histologic sections have confirmed the diagnosis and upgraded the estimated degree of malignancy.

To summarize, all but 2 of the 19 children exposed on Rongelap have now exhibited thyroid dysfunction, some of a serious degree. A small but probably significant number of people exposed as adults on Rongelap and other islands are experiencing serious thyroid problems.

This first case of neoplastic thyroid disease in a person on Utirik suggests closer medical surveillance of the Marshallese living on Utirik. Dr. Conard proposes visiting Utirik during his mid-winter medical survey of the Marshallese.

Consideration is being given to issuance of a public announcement dealing with the above findings.

Sincerely,

bcc: Chairman Seaborg (2)  
Commissioner Ramey  
Commissioner Johnson  
Commissioner Thompson  
Commissioner Larson  
Cong. Ref. (2)  
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B. J. BLOCH

Acting General Manager