U. S. NAVAL TECHNICAL MISSION TO JAPAN
CARE OF FLEET POST OFFICE
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RESTRICTED

From: Chief, Naval Technical Mission to Japan.
To : Chief of Naval Operations.

Subject: Target Report - Opportunity for the Infection of Naval Personnel with Tuberculosis.

Reference: (a)"Intelligence Targets Japan" (DNI) of 4 Sept. 1945.

1. Subject report, covering Target M-07 of Fascicle M-1 of reference (a), is submitted herewith.

2. The investigation of the target and the target reports were accomplished by Comdr. P.B. Ayres, (MC) USNR, assisted by Lieut. P.E. Arioli, (MC) USNR, Lieut. W.W. Woodworth, USNR, Lt.(jg) F.J. Gilbert, USNR, Lt.(jg) R.M. Hendrickson, USNR, and Pfc. W.P. Costello, USMC.

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M-07

OPPORTUNITY FOR INFECTION OF NAVAL PERSONNEL WITH TUBERCULOSIS IN JAPAN

"INTELLIGENCE TARGETS JAPAN" (DNI) OF 4 SEPT. 1945

FASCICLE M-1, TARGET M-07

DECEMBER 1945

U.S. NAVAL TECHNICAL MISSION TO JAPAN

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SUMMARY

MEDICAL TARGETS

OPPORTUNITY FOR INFECTION OF NAVAL PERSONNEL WITH TUBERCULOSIS IN JAPAN

In the exploitation of this target one of the few findings of potential value to U. S. naval medicine has been discovered in the Japanese procedure of using B.C.G. vaccine for "immunization" against tuberculosis. Statistics and records have been burned, destroyed by bombing or stored for safety in caves. Clerical personnel acquainted with the statistical situation have frequently been dispersed or have vanished, so that a careful investigation of the incidence of tuberculosis among civilians in the neighborhood of U. S. naval bases in JAPAN, would have required the attention of all the members of this section for one half the total time it has spent in exploiting all the targets directed under Fascicle M-1. Hence the information presented is admittedly not always supported by records which can be produced.

The findings by other investigating committees have been referenced, and it is felt that presently a total sum of information will be available which will permit a sufficient evaluation of the situation to make constructive recommendations.

REFERENCES

A. Japanese Personnel Who Assisted in Locating Equipment and/or Documents:

1. Vice Adm. HORIUCHI, (MC) IJN, Director, Medical Bureau, IJN.

2. Vice Adm. YASUYAMA, CO of OMURA Naval Hospital.

B. Japanese Personnel Interrogated:

1. The same personnel named in reference "A".

2. All those referenced in "Data Relative to Life in the Jungle" NavTechJap Report, Index No. M-01, M-08.

C. Reports of Other Investigating Committees:

1. Periodic Reports on the Activities of the Committee for the Technical and Scientific Investigation of Japanese Activities in Medical Sciences, Office of the Chief Surgeon, GHQ, SCAP, AFPAC, (Advance Echelon). (October - November.)

   a. "Treatment of Tuberculosis with Shodonic Acid - SENDAI."
   b. "Tuberculosis Death Rate of Civilians - SENDAI."
   c. "B.C.G. in Tuberculosis Immunity - SAPPORO."
   d. "Tuberculosis Inoculation N.R.C. - TOKYO."

2. Monthly Reports of the Public Health and Welfare Section of the GHQ, SCAP, AFPAC.

3. Report of the (USPHS) Medical Section of the UNITED STATES Strategic Bombing Survey in JAPAN.

INTRODUCTION

The purpose of the investigation of this target needs no explanatory expansion. All previous reports on the incidence of tuberculosis in JAPAN had led health authorities in the UNITED STATES to believe that a definite hazard might well exist to the health of our occupation troops.

The fragmentary field reports of the amount of tuberculosis in the Japanese armed forces, particularly among naval personnel served to reenforce the conviction that a hazard existed. From interrogation of medical personnel in Japanese naval bases, however, this suspicion was not verified, and the figures quoted and statistics given were favorable, rather than alarming. However, on closer inspection, and correlation of known facts, the reports become untrustworthy, particularly when one of the few intellectually honest senior medical officers of the Japanese Navy gave the following advice:

> "Do not believe them (other Japanese naval medical officers) about the status of tuberculosis in our Navy. They know the facts, but will not admit them even to themselves. The statistical reports are not representative. No one really knows how much tuberculosis exists in the Navy but there is a great deal. In my opinion it is the chief cause of death, apart from actual combat casualties."

THE REPORT

1. a. The incidence of tuberculosis among the civilian population was given in M-"E", NavTechJap Report, as pulmonary, one percent of the total population, and other tubercular infection, three percent. Public health statistics must be obtained later from such reports as reference "C", paragraph two, since records had been impounded and were not available for examination. This refers to the TOKYO Plains Area and YOKOHAMA. In NAGASAKI and SASEBO, these records had been destroyed by fire-bombing.

b. The incidence of tuberculosis in the Japanese Navy was reported as shown in Table I.

TABLE I

Year	Patients per 1000	Death Rate per 1000
1939	8.31	1.58
1940	8.21	1.68
1941	9.09	1.38
1942	7.79	1.26
1943	3.99	0.74
1944	2.99	1.02

In this connection, the quotation in the introduction in reference to accuracy of statements is to be noted. It was admitted that tuberculosis increased markedly until 1941, at which time mass chest X-ray screening techniques were adopted. Contax (35mm) film of the fluoroscopic image was begun (specimens of film submitted under separate cover) and by this procedure suspicious and definite cases were weeded out and rejected.

c. The Medical Corps, alarmed by the tuberculosis infection rate began to do a Mantoux skin test on all entrants into the Navy. It was found that one half had a negative reaction. Of this group, a large percentage soon "broke down" and had to be discharged. It may be noted that if such were the case, they must have been frequently exposed to fairly heavy infections, which occurred after they entered the Navy, and infers the presence of considerable open tuberculosis among their shipmates.

At this point B.C.G. vaccine, prepared in JAPAN, was employed as an immunizing agent. All Mantoux negative cases on admission were given a course of two injections subcutaneously 0.02 grams each, seven days between injections. The Mantoux test was repeated in three months and if still negative, another injection course of B.C.G. was given, in the same dosage. This procedure decreased the number of cases by two-thirds, and although the total number of cases had increased due to the vast expansion of the Navy, the rate per 1000 had decreased remarkably.

In view of these reports it would be well to refer to "Japanese Medical Services Afloat", NavTechJap Report, Index No. M-A "A", which quite accidentally contains an interrogation report admitting to the development of 20 cases of tuberculosis aboard the ship. The standard practice of diagnosing as "chest infiltration cases" those whose lesions are demonstrated by X-ray, but not by sputum examination, should be remembered as bearing on the subject.

Naval laboratory technicians encountered were generally of poor ability and doubtless missed many "open cases" as well.

d. Some ten years ago a public health program was put in motion to X-ray all Japanese between the ages of 16 and 25, this being considered the susceptible period. The program got under way in the larger cities, where X-ray equipment and facilities were available, and some 9,000,000 cases were examined. The B.C.G. immunization course was started later, but similarly excellent preventive results were claimed by civilian authorities.

During the war-years, the scarcity of physicians, the curtailment of funds, and the "emergency situation" put an end to the program. Inadequate diets, insufficient clothings and hard work have lowered the national resistance and the aftermath of the extensive bombings have undoubtedly increased the potential spread of the disease.

2. There is, and will be, considerable mingling with civilians by our forces, which will probably increase. At present this is almost entirely in the open air, although amusement halls, cabarets and the like provide for fairly close contact, and facial proximity is frequently sufficient to make air-borne infection not only possible but probable. The amount of close contact in infected houses will probably remain small. Moving picture theatres, halls, theatres and bazaars all offer some risks, but on the whole of a minor nature.

3. Food handlers so far have not been routinely X-rayed. They are examined for skin and infectious diseases and given a general physical examination which in some instances includes serology. It should be made a matter of record that all Japanese personnel acting as hotel boys, room clerks, and cooks, waiters, waitresses etc., should be screened for tuberculosis.

4. Recommendations

a. The use of B.C.G. as an immunizing agent should be thoroughly investigated, as it seems to offer startling benefits.

b. Japanese personnel in close and continued contact indoors with numbers of occupation troops should be screened for tuberculosis.