

MEDICINE

A-Bomb Radiation Sickness

Jap victims suffered sickness similar to that seen in patients who get sick following massive doses of X-ray or radium.

► JAP VICTIMS of the atomic bomb suffered "true forms of radiation sickness" similar to that seen in the United States in patients who get sick following massive doses of X-ray or radium, Comdr. Joseph J. Timmes, Navy medical officer, reports. (*Naval Medical Bulletin*, Feb.)

Comdr. Timmes was one of the first American physicians to see atomic bomb patients in Japan. Aboard the U.S.S. Wichita, he steamed into Nagasaki Ko on Sept. 11, 33 days after the atomic bombing and about 10 days before the arrival of the various scientific commissions.

Fever, a sick feeling, loss of appetite, bleeding gums and bloody diarrhea were the symptoms complained of by the average patient when first brought to the hospital for treatment of A-bomb sickness. Their teeth were loosened and could easily be removed by hand. Gold fillings subsequently examined contained radiant energy. Many lost much of their hair but at the end of a month a few had begun to grow new, downy hair. Whether the baldness will be permanent is at this time "purely speculative," Comdr. Timmes states.

A large percentage of the early victims, it can be assumed, died of the effects of the radiant energy released by the atomic bomb, Comdr. Timmes reports.

The idea that the area would continue to be dangerously radioactive, however, is dispelled by Comdr. Timmes' findings.

"Our first concern was the amount of radiant energy possibly remaining in the area and in the victims," he states. "X-ray film buried in the bombed area and attached to various objects about the so-called crater (a true crater does not exist) failed to reveal the presence of radioactive elements. Later the other investigators, with the aid of Geiger point counters, reported the area to be safe and found only negligible amounts of radiation.

"X-ray films were then attached to the limbs of atomic victims at the hospital and kept in place for 18 hours. All of these films failed to reveal radiation, which may be explained by the fact that

although these patients were exposed to forms of radiant energy they did not absorb any in large amounts."

The principal effect of the radiation on the patients was on the bone marrow. Most of them suffered from an aplastic type of anemia. Their blood was deficient in red cells and hemoglobin. A number of patients with about a fifth or sixth the normal number of white blood cells were seen and in some cases the white cells disappeared completely before death. Only a few cases of X-ray skin burns and those mild in character were seen.

Many of the patients died as the result of infection attacking them after the bombing, particularly bronchopneumonia. In general, the younger persons had more recuperative abilities but it was difficult to determine the prognosis in the various cases.

Japanese attempts to treat the patients had been meager because most of their medical supplies had been depleted. A

primary school had been converted to a hospital, since the hospital and medical school of Kyushu University at Nagasaki had been destroyed. The Japanese gave the patients small amounts of vitamins, liver extract and occasionally a blood transfusion.

The U. S. Navy group had rather limited supplies for treating these patients. The penicillin and plasma had "the anticipated beneficial effects."

Science News Letter, March 9, 1946

CHEMISTRY

De-Gassing Molten Metals Subject of New Patent

► GETTING undesirable gases out of molten metals is the problem attacked by the process on which Arthur T. Cape of Columbus, Ohio, was awarded patent 2,395,458. It was already known that this could be accomplished by getting the metal into intimate contact with carbon dioxide, but previous attempts to accomplish this have not been very successful. Mr. Cape turns the trick by using, not gaseous carbon dioxide, but the solidified form known commonly as "dry-ice." This is submerged in the molten metal by various means; it of course vaporizes rapidly and in bubbling through the hot liquid carries off the contaminating gases.

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