

Prompt and utter destruction: the Nagasaki disaster and the initial medical relief

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Abstract

The article takes an overall look at the initial medical relief activities in Nagasaki after the atomic bomb fell there on 9 August 1945. In Nagasaki, as in Hiroshima, medical facilities were instantaneously destroyed by the explosion, yet the surviving doctors and other medical staff, though themselves sometimes seriously injured, did their best to help the victims. Medical facilities in adjacent areas also tended to the wounded continuously being brought there; some relief workers arrived at the disaster area when the level of radiation was still dangerously high. This article will in particular highlight the work of the doctors.

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In the memories of many people the disasters of Hiroshima and Nagasaki have remained associated with the liberation and peace that swiftly followed the

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dropping of the atomic bombs in August 1945. Before the use of the bombs a long and cruel war had continued, full of misery and death; the country that began the war in the Asia-Pacific region was Japan. After they were dropped on two Japanese cities the war soon came to an end. Quite apart from the political process of how the decision to drop them was reached, the chronological context left many with the impression that these bombs brought about the end of the war.

Most of the Allied soldiers, who had endured a cruel ordeal of up to three and a half years in Japanese army prisoner-of-war (POW) camps, felt that they would not have survived if liberation and the end of the war had come only a little later than it did. Marcel Junod, who was head of the ICRC delegation stationed in Japan and had attempted to help the victims in Hiroshima after finally getting there a month after the bomb fell, had initially been entrusted with another difficult task, namely of assisting the Allied prisoners of war held by the Imperial Japanese Army.¹ Although they certainly had no wish for any indiscriminate slaughter of the enemy nation's people, what they and their friends did very much hope to see was a quick and thorough defeat of the enemy, together with a rapid liberation and a robust peace. The belief that the dropping of the atomic bombs ended the war and prevented further victimization and bloodshed overwhelmingly became their "standard memory", while some of the former Allied POWs in Japanese captivity lamented that they owed their freedom to the atomic bombs.²

This article will take an overall look at the initial phase of medical relief activities in Nagasaki, where the second A-bomb was dropped. There, as in Hiroshima, an annihilating blow was dealt to medical facilities within a certain radius of the explosion's epicentre. The city's principal medical facility, the Nagasaki Medical College – today's Faculty of Medicine of the University of Nagasaki – was situated only 600 metres away. At that time the population of Nagasaki City was 240,000, and the number of practising doctors within the city had decreased by half because so many had been sent away to serve with the armed forces. With the assistance mainly of the Nagasaki Municipal Association of Physicians, arrangements had been made for a relief system combined with anti-air raid preparations and including twenty-two medical relief centres with 327 relief personnel. The Nagasaki Medical College played a key role in this effort.³

The Medical College president, Dr Susumu Tsunoo, returning to Nagasaki from a visit to Tokyo, had crossed Hiroshima on foot the day after it had been bombed. When he got back to Nagasaki on 8 August, he reported on the Hiroshima disaster to the college's staff and students, explaining that the weapon

1 Marcel Junod, "The Hiroshima disaster", *International Review of the Red Cross*, No. 230 (September–October 1982), pp. 265–80, and No. 231 (November–December 1982), pp. 329–44. On the subject of the Japanese treatment of Allied POWs, see also Margaret Kosuge, "The non-religious red cross emblem and Japan", *International Review of the Red Cross*, No. 849 (2003), pp. 75–94; Philip Towle, Margaret Kosuge and Yōichi Kibata (eds.), *Japanese Prisoners of War*, Hambledon & London, London, 2000.

2 See, e.g., René Schäfer's carvings preserved at the Nagasaki Atomic Bomb Museum.

3 For Nagasaki's anti-air-raid preparations prior to the A-bombing, see Nagasaki Municipal Office (ed.), *Nagasaki Genbaku Sensai-shi* (Atomic bomb damage of Nagasaki), Vol. 5, Kokusai Bunka Kaikan, Nagasaki, 1983, pp. 4–227; on Nagasaki's relief system organized before August 1945, see especially pp. 129–41.

used was a new type of bomb of inconceivable power. Needless to say, “for many people it was not easy to have any idea of that new type of bomb, and it was all the harder to know what might be the best means of guarding against it”.⁴

At 11.02 a.m. on the day after Dr Tsunoo’s warning, the atomic bomb was dropped on Nagasaki. The Medical College and its adjoining hospital were completely destroyed. Dr Tsunoo, who at the time of the explosion was examining a patient in one of the hospital wards, was injured by the bomb blast and was transported to a hill behind the hospital together with surviving students and staff. The cornerstone of what was supposed to be Nagasaki’s emergency medical system had collapsed in an instant.⁵

Despite their injuries, the surviving doctors, nurses and students at the Medical College began soon after the explosion to attend to the bomb victims. At the same time other doctors and nurses assigned to relief work, including those of the Japanese Red Cross, were busy trying to help the disaster victims in the affected area within 4 km of the epicentre, though in some cases badly hurt themselves. Medical facilities close to Nagasaki also did their best to care for the wounded, who were continuously being brought in, and within several hours of the explosion relief workers dispatched in special brigades arrived from nearby areas to help on the spot, even though the levels of radiation were still dangerously high. The following account will mainly give examples of what happened in the area directly affected. It will in particular highlight the doctors’ work. In what circumstances did they carry out their initial medical relief activities? What can we read into these activities, carried out in such a hopeless situation?

9 August 1945, 11.02 a.m.

The atomic bomb is dropped on Nagasaki

Nagasaki’s topography was complex (see map). The city extended from north to south along a narrow strip of land between two steep hills some 200–360 metres high. It was roughly divided between the older city area in the Nakajima river basin and the newer city area in the Urakami river basin, and to the south it faced Nagasaki Bay. Nagasaki’s air defences had been considerably reinforced since 1941 and a number of laterally entered air raid shelters had been dug into the slopes of

4 Toshihiko Kouji, *Nagasaki Ikadaigaku Kaimetsu no Hi* (The annihilation day of Nagasaki Medical College), Marunouchi Shuppan, Tokyo, 1995, p. 139.

5 Including Dr Tsunoo, 894 of the college’s staff and students died, either immediately, or after escaping to the hill behind the college, or from physical after-effects of the A-bomb; the figures are based on a 1996 survey. For details of the damage to the college, see *Genbaku Fukkō 50 Shūnen Kinen: Nagasaki Ikadaigaku Genbaku Kiroku-shū* (The fifty years after the A-bombing and the recovery: Nagasaki Medical College records of the A-bombing), Nagasaki Ikadaigaku Genbaku Kiroku-shū Henshū Iinkai (Editorial Committee for Nagasaki Medical College Records of the Atomic Bombing), 3 vols., Nagasaki Daigaku Igakubu Genbaku Fukkō 50 Shūnen Igaku Dōsō Kinen Jigyō-kai, Nagasaki, 1996.

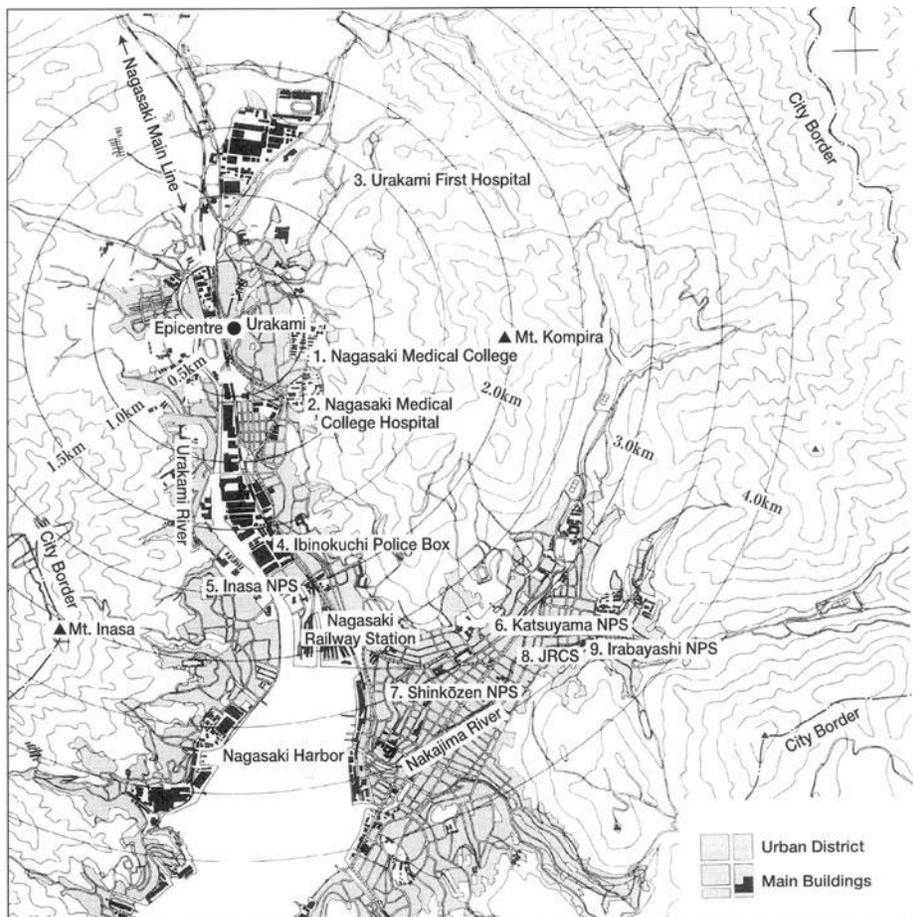


Figure The main medical relief centres immediately after the bombing of Nagasaki on 9 August 1945.* Contour lines indicated between 50 metres. ** This map is based on the materials and data in *Genbaku Saigai* (note 6), *Nagasaki Genbaku Sensai-shi* (note 25), *Nagasaki no Genbaku-ikou wo kirokusuru-kai* [The recording group of the A-bombed buildings in Nagasaki], and *Shinpan Genbaku-ikou Nagasaki no Kioku* [The A-bombed buildings: Nagasaki's memories], new edition, Kaichōsha, Fukuoka, 2005.

the hills. At the time of the A-bombing the city had already undergone five air raids, on 11 August 1944 and 26 April, 29 July, 31 July and 1 August 1945.

Nagasaki had only recently been added in place of Kyoto to the list of “candidate” cities for targeting by the new weapon and on the day the bomb was dropped it was in fact an alternative target. The first-choice target, the city of Kokura – also in the Kyushu district, in the southernmost part of mainland Japan – lay under heavy cloud cover and a direct line of sight to assist in accurately dropping the weapon was impossible. The plane carrying it was therefore rerouted

to Nagasaki, where the sky was also heavily overcast. As a result, the second A-bomb was released over the Urakami district in the newer section of the city, a few kilometres north of the original target point. It was an area inhabited by many Catholics, who had endured a long history of oppression since the Tokugawa Shogunate period.

“Prompt and utter destruction”: wind blast, searing heat and radiation

The 4.5-ton plutonium bomb, which exploded at an altitude of about 500 metres, is estimated to have had an explosive force equivalent to 22,000 tons of TNT and to have released energy equivalent to approximately 20 trillion calories. In terms of conventional air raids in 1945, 22,000 tons of TNT would have had to be carried on more than 4,000 B29 bombers.⁶ Such overwhelming destructive force was applied almost instantly within a certain radius of its epicentre.⁷

Roughly half of the energy of a nuclear explosion is accounted for by the blast, while heat radiation accounts for approximately one third and initial radiation (gamma rays and neutron rays) for about 5 per cent. The remaining 10 per cent is residual radiation released more than one minute after the explosion. Shōji Sawada and others have pointed out that, in comparison with TNT explosions, the characteristics of a nuclear device include a wholly different order of great explosive force (by weight, more than 1 million times that of TNT), a variety of destructive effects (whereas TNT’s destructive effect comes almost entirely from blast), blast destruction characterized by “shock waves”, damage from “heat rays” (the surface temperature of an atomic fireball resulting from a nuclear explosion is 7,000 degrees Celsius, while the temperature at the core of a TNT explosion is 5,000 degrees), damage from radiation (initial, residual and induced radiation that has serious effects on the human body), strong pulsed electromagnetic effects (incapacitation of electric machines and devices as well as communications systems), and composite damage caused by a combination of these various factors.⁸

The moment of explosion and immediately after

The impact of that moment at 11.02 a.m. on 9 August 1945 is imprinted on personal relics such as watches or clocks, can be seen in commemorative statues and exhibitions at the museums set up in postwar Nagasaki and is also recorded in numerous publications. The disaster was instantaneous. The ground temperature

6 *Genbaku Saigai; Hiroshima/Nagasaki* (The A-bomb disasters: Hiroshima/Nagasaki), Hiroshima-shi Nagasaki-shi Genbaku Saigai-shi Henshū Iinkai (The Hiroshima and Nagasaki Municipal Joint Editorial Committees for Records of the Damage Caused by the A-bombings), Iwanami Shoten, Tokyo, 1985 (hereinafter *The A-bomb disasters*), pp. 56–7.

7 Shōji Sawada et al., *Kyōdō Kenkyū Hiroshima Nagasaki Genbaku Higai no Jissō* (The joint investigations into the actual damage of Hiroshima and Nagasaki caused by the A-bombings), Shinnihon Shuppansha, Tokyo, 1999, pp. 43–44.

8 *Ibid.*, pp. 44–45.

at the epicentre reached 3,000–4,000 degrees. The pressure of the Nagasaki blast ranged from 6.7 to 10 tons per square metre, but the time of continuous application of that pressure is estimated at only 0.4 seconds.⁹

In Nagasaki, damage extended 4.7 km from the epicentre, and those who died when the bomb exploded were mainly within a radius of 4 km. At the epicentre, heat rays caused water to evaporate from human organs, the bones of a human hand to stick to a clump of glass and a victim's skull to remain on the inner surface of a steel helmet. The Urakami Branch Prison 300 metres north of the epicentre was completely destroyed, and 139 of the inmates, prison staff and their families were killed; there were eighty-one inmates there altogether, including those in custody pending trial. Among them there were at least forty-six of Chinese or Korean nationality. The Urakami Catholic church, about 500 metres north-east of the epicentre, collapsed from the blast, only part of the walls of its main hall remaining standing. It was grievously burnt by the heat rays from the blast, and within the church edifice two priests and several dozen worshippers were killed.¹⁰

A boy (aged 16) who was 1 km from the epicentre and a young woman (aged 24) who was 1.5 km away describe the instantaneous destruction as follows:

A light that was orange and like a camera's flash streaked over my head (I was standing in the shadow of a brick warehouse wall 4 metres high). Then a mother and her children who were about 10 metres away from me, together with other children running away from where I was and passing the mother with her children, instantaneously disappeared.¹¹

In just an instant, things on the ground blew away and were destroyed. It was a scene where everything was completely in disarray. I thought it was probably the end of this world.¹²

A man (aged 30) 1.5 km from the epicentre and a young girl (aged 9) 3 km from the epicentre described separately the situation immediately after the bomb was dropped:

After that flash of light, there was one person after another trying to escape in my direction, and they were all turned pitch-black. Everything was burned black; bright red blood was coming out of black charred skin. There was not a single person with a complete body. One could scarcely tell the difference between men and women.¹³

People without arms or legs rolled about on the ground, crying for help. Some people jumped about like rabbits, some of them even tried to depend on

9 The A-bomb disasters, above note 6, pp. 61–2.

10 *Records of the Nagasaki Atomic Bombing*, City of Nagasaki, Nagasaki, 1996, pp. 8–9, 15–32.

11 Nihon Gensuibaku Higaisha Dantai Kyōgikai (Japan Confederation of A- and H-Bomb Sufferers Organizations) (ed.), *Genbaku Higaisha Chōsa: Hiroshima/Nagasaki Shi to Sei no Shōgen* (A survey of the A-bomb sufferers: Hiroshima/Nagasaki, testimonies of death and life), Shinnihon Shuppansha, Tokyo, 1994, p. 255.

12 *Ibid.*, p. 284.

13 *Ibid.*, p. 269.

a child like me, begging for water. In this wave of people you couldn't tell whether they were men or women, and which were their eyes, their noses, or their faces.¹⁴

The fires

Fires broke out immediately within a kilometre of the epicentre, due to the intense heat. At a distance of 2–3 km, secondary fires broke out about an hour later, and at 2.5–3.3 km, fires broke out about an hour and a half after the initial blast. A man (aged 41) who was 3 km from the epicentre stated that “Tens of thousands of homes burned all at once, and although several tens of thousands of people died, there was not one person who was engaged in putting out any of the fires, and the only thing that met your eye was the thousands of houses which were consigned to flames, as well as the dead bodies.”¹⁵ In order to get away from the inferno, those who could move at all, and even people who were seriously injured, fled into the hills surrounding the city. Many died on what they hoped would be the road to safety, making piteous pleas for water.

Among those who fled to the hills were Allied prisoners of war who had been held in a prisoner-of-war camp 1.7 km from the epicentre.¹⁶ After the bomb fell, one POW, recalling how he looked down over what had been the northern part of Nagasaki, said, “I cannot deny the feeling that this was a “beautiful” sight. After my life of enslaved captivity that had lasted nearly 4 years, I felt that I had finally been set free.”¹⁷ Some of the prisoners of war, though surrounded by the conflagration, helped to put out fires and gave assistance to people at places to which they had fled in search of safety.

[The prisoners of war], relying on their bodily strength, pushed aside and removed wooden timbers that had collapsed and, covered with dirt and sweat, they worked to put out the fires. For me, it was the first time that I had seen, right in front of my eyes, this beautiful sort of neighbourly love, or perhaps I should more correctly say the putting into practice of Christ's instructions to “love thy neighbour”.¹⁸

I had let a nurse apply first-aid measures, but both my daughter and myself were all covered by blood. When I got to the top of the road, a foreigner

14 Ibid., p. 300.

15 Ibid., p. 298.

16 Around the end of June 1945 a number of Dutch citizens, but also some Australians and British, had been brought there. They were forced to work for eleven to twelve hours each day in shipyards or excavating air raid shelters. At the time the A-bomb was dropped, 169 detainees remained, most of them engaged in digging air-raid shelters. Hugh V. Clarke, *Last Stop Nagasaki*, George Allen & Unwin, London/Sydney/Boston, 1984.

17 Jidayū Tajima and Shunji Inoue, *Renga no Kabe: Nagasaki Horyo Shūyōjo to Genbaku no Dokyumento* (The brick walls: the documents of the POW camps in Nagasaki and the A-bombing), Gendaishi Shuppan, Tokyo, 1980; repr. in Saburō Ienaga et al. (eds.), *Nihon no Genbaku Kiroku* (Japanese records of the atomic bombings), Vol. 13, Nihon Tosho Sentā, Tokyo, 1991, pp. 133–4.

18 Ibid., pp. 135–6.

quickly ran up and asked (in Japanese), “Is the baby okay?” It was a prisoner who had been in the POW camp in Saiwai-chō town ... The prisoner took out from the first aid kits tincture of mercurochrome, which he applied, and then applied bandages. He did this for all including my son and my daughter. The prisoners always had bandages they had brought along with them. Under the circumstances, I felt there was no longer any distinction between a friend and an enemy.¹⁹

Looking for helping hands

In the city streets, surrounded by rubble and flames, the sea of fire and tens of thousands of corpses, the survivors pleaded for help. But according to the records of the Nagasaki branch of the Japanese Red Cross Society, immediately after the bomb explosion “the entire area surrounding the epicentre of the blast was just like a living hell, and it was no use thinking about medical assistance.”²⁰ A female teacher, who was in a primary school 3 km from the epicentre not long after the bomb had been dropped, recalls,

People wounded in the blast were brought in before there was time to clean up the large lecture hall. Within just a very short space of time there were more than a thousand people, leaving hardly a place to stand. People’s skin was peeling, then rolling up or drooping downward, and there were people whose eyes had popped out, people at their last breath as blood flowed in streams, and people whose voices saying “give me water” were becoming ever fainter. This was exactly what was meant by a “living hell”, I was so frightened that I couldn’t care for them but just went off into a faint.²¹

The first people able to do relief work immediately after the disaster were simultaneously people who themselves needed help. The more serious their injuries, the greater the probability that they would lapse into a state where they could not save those others who asked for help.²²

When I embraced my 5-year-old daughter, I thought about how even though she had been such a pretty child, her body was now completely covered with black burns and I could not distinguish her eyes or nose. At that time I resolved that “this child cannot be saved, but I’d at least like to have her die holding the hands of a hospital doctor”.²³

19 NHK Shuzai-han (NHK Interviewing Team), *Nagasaki: Yomigaeru Genbaku-shashin* (Nagasaki: Photographs of the A-bombing revived), Nihon Hōsō Shuppan Kyōkai, Tokyo, 1995, p. 141.

20 Nagasaki Branch of the Japanese Red Cross Society (ed.), *100 Nen no Ayumi* (A history of a hundred years), Nagasaki, 1988, p. 26.

21 A survey of the A-bomb sufferers, above note 11, p. 308.

22 Later on, in the recollections of persons who had survived the bombing, situations where they “did not” or “could not” save others came to take on as peculiar and continuing a significance, paradoxically, as what they “did do” on that day. Masaharu Hamatani, *Genbaku Taiken* (Experiences of the A-bombings), Iwanami Shoten, Tokyo, 2005, pp. 13–19, 39.

23 A survey of the A-bomb sufferers, above note 11, p. 287.

In circumstances devoid of any hope of effective help, people still earnestly sought the “hands” of medical doctors as a way of enabling their loved ones to die in a more “humane” way.

Doctors on that fateful day of 9 August

The Nagasaki Medical College

At 11.02 a.m., at the Nagasaki Medical College 600 metres away from the epicentre, 410 students had ended their summer vacations and were attending regular classroom lectures (map, position 1). Of these, 257 died instantly at the time of the explosion and the others all died after evacuation. At the hospital attached to the college, approximately 210 students were engaged in practical training; seventy-four of them died either instantly or after evacuation²⁴ (map, position 2). Within the Medical College, eleven emergency medical teams had been organized prior to the A-bomb disaster to deal with wartime contingencies, but in this unprecedented situation “there was no point in thinking about putting together such rescue teams since the medical doctors had themselves fallen into a situation of needing some serious help from others”.²⁵

Nevertheless, victims gathered at the college seeking treatment by the doctors. While crawling out from the rubble of the hospital, a medical student, Eiichi Kobayashi (aged 19), came across Dr Takashi Nagai (aged 37), an associate professor at the time and a surgeon well-versed in radiation technology, being supported by a head nurse while fleeing to what he hoped would be a safer place. Blood was running steadily from a wound to Nagai’s head. As they and other survivors managed to reach the hospital’s main entrance, a large number of people seeking help were already to be seen there.²⁶

Within fifteen minutes of the explosion Dr Nagai, who as a result of his work involving radiation had earlier been diagnosed with leukaemia, was busy inside the hospital treating the wounded endlessly streaming in.

“Doctor, help me!” “Give me medicine!” “Look at this wound!” “Doctor, I’m cold. Give me clothes!” A strange group of naked human beings crowded around us, all shouting. These were the people who somehow survived when

24 Kouji, above note 4, pp. 46, 104–5.

25 Nagasaki Municipal Office (ed.), *Nagasaki Genbaku Sensai-shi* (Atomic bomb damage of Nagasaki), Kokusai Bunka Kaikan, Nagasaki, Vol. 1, 1977, p. 503.

26 Eiichi Kobayashi, “Watashi no hibaku taiken to hibaku iryō” (My A-bomb experiences and medical activities), in *Hibaku 60 Shūnen Kinen Jigyō Jikkō Iinkai, Nagasaki Daigaku Daigakuin I-shi-yakugaku Sōgō Kenkyūka Genbaku Kōi-shōgai Iryō Shisetsu, Nagasaki Igaku Dōsōkai* (Executive Committee for the Memorial Project of the Sixty Years after the A-bombing, Atomic Bomb Disease Institute, Faculty of Comprehensive Studies for Medicine, Dentistry and Pharmacy, University of Nagasaki, and the Nagasaki Medical Alumni) (eds.), *Nagasaki Ikadaigaku to Genbaku: Hibaku 60 Shūnen Kinen-shi* (Nagasaki Medical College and the atomic bombing: Memorial essays collection commemorating the sixty years after the A-bombing), *Hibaku 60 Shūnen Kinen Jigyō Jikkō Iinkai*, Nagasaki, 2006, pp. 7–8.

everything was swept into the air and hurled in all directions by the explosion. Some, in whom a spark of life remained, extricated themselves from the vast and motionless heap of dead flesh and crawled up to me. Clinging to my feet, they cried: “Doctor, help me! Doctor, help me!”²⁷

Dr Nagai had four and a half years’ experience as an army medic on battlefields in China. Pausing briefly from attempting to give treatment inside the hospital, Nagai, together with the Kobayashi and others, set out for the hospital’s main entrance. As the flames approached, Nagai decided to give priority to wounded patients in the hospital wards rather than give first aid to new arrivals at the hospital site. From around 2 p.m., as the fires increased in intensity, he called an end to “rescue work” on the hospital premises and transferred the medical relief centre very temporarily set up at the hospital’s main entrance to a hill behind the Medical College, where there seemed to be no danger of similar fires. The hill was crowded with wounded people.

The Medical College campus, a scene of devastation, was engulfed in flames. Even though many of the surviving people associated with the college were seriously injured, about fifty of them, including nurses and students, were assigned to relief work. The doctors among them in addition to Dr Nagai were Associate Professor Raisuke Shirabe and Professor Kōhei Koyano, both surgeons. These doctors took charge of the remaining staff and students and carried out relief work on the campus. Dr Koyano went out to the part of the city that was ablaze and gave instructions for setting up medical relief centres, while Dr Shirabe continued his relief work after giving Dr Nagai emergency surgical treatment for a serious injury to his temple.²⁸

At the time of the disaster, the “hospitals” in the affected area were destinations for large groups of homeless and wounded people. Physicians such as Dr Nagai, who had accumulated some battlefield experience as an army medic, or Dr Shirabe, who tried his best in desperate conditions to perform the work of a surgeon, managed, but just barely, to make what had been their state-of-the-art medical facility, now largely reduced to rubble, continue to function, at least as a “relief centre”. This was possible only because of their discernment, their leadership abilities, their quick-wittedness and their sense of humanity.

27 Takashi Nagai, *The Bells of Nagasaki*, trans. William Johnston, Kodansha International, Tokyo/New York/London, 1994, pp. 29–30. The original Japanese edition, entitled *Nagasaki no Kane*, was published in 1949 by Hibiya Shuppan, Tokyo, together with an appendix, “Manira no higeki” (The Tragedies of Manila), about Japanese atrocities in the city of Manila during the war, under the occupation censorship.

28 The fifty years after the A-bombing, above note 5, Vol. 1, pp. 189, 190–3, 458. For details of Dr Shirabe’s activities, see Raisuke Shirabe and Yasuo Yoshizawa, *Ishi no Shōgen: Nagasaki Genbaku Taiken* (The medical doctors’ testimonies: The experiences of the Nagasaki A-bombing), University of Tokyo Press, Tokyo, 1982.

The Urakami First Hospital and the other relief centres in the disaster area

On a hill 1.4 km to the north-east of the epicentre was the Urakami First Hospital (now the St Francisco Hospital run by Catholic monks) (map, position 3). In early August 1945 this hospital, which was primarily a school of theology and had been converted during the war into a sanatorium for tuberculosis patients, had a staff of about twenty and approximately seventy patients. As a specialist in the treatment of tuberculosis, Dr Tatsuchirō Akizuki, a Buddhist and at that time 29 years old, was in charge of medical care.²⁹

At the instant of the explosion, because all the staff members were inside its brick buildings – although many were trapped under collapsed walls and shelves due to the tremendous impact of the blast – the hospital managed to get by without any deaths directly attributable to the bombing. Dr Akizuki was first asked for assistance not by people from outside, but by some of the hospital patients.³⁰ Then, about twenty minutes after the explosion, “white ghost-like people” began arriving at the hospital. What made them look like “white ghosts” was dust from wall plaster, and all of them in fact had serious burns. A little after noon, groups of wounded with blackened burns trudged one after the other up the hill to the hospital, where they were able to see Dr Akizuki. When they got to the hospital forecourt, their first words were often “Is this the hospital?” and “Are you a doctor? Please examine me”.³¹ The brick hospital ward had caught fire from the roof and was aflame.

If I had only not been a doctor, I don’t know how much easier my feelings would have been. I might have been happy to escape disaster with my hospital colleagues. However, I am a doctor. And since the wounded patients and patients with burns all over their bodies were groaning in the hospital’s yard, how could I simply ignore them? The hospital ward had burned down, and medicines and medical equipment had been consumed in the fire. However, so long as there were patients for me to care for, I had to fulfil my duties as a doctor.³²

Since there were emergency citizens’ rations of unpolished rice in the storehouse which had come through the fire unscathed, Akizuki and the Urakami relief workers built an oven out of the rubble and made the rice into rice-balls. By

29 Akizuki had formerly been a radiology assistant working under Dr Nagai and had himself previously suffered from tuberculosis. Yamashita Akiko, *Kaiteiban Natsukumo no Oka: Hibakuishi Akizuki Tatsuchirō* (The hill of summer clouds: Tatsuchirō Akizuki, an A-bombed medical doctor, rev. edn), Nagasaki Shinbunsha, Nagasaki, 2006, pp. 19–24.

30 The material on Tatsuchirō Akizuki in this paper is derived mainly from his *Nagasaki Genbaku-ki: Hibaku Iishi no Shōgen* (Records of the Nagasaki A-bombing: Testimonies of an A-bombed medical doctor), Kōbundō, Tokyo, 1966, repr. in Saburō Ienaga et al. (eds.), *Nihon no Genbaku Kiroku* (Japanese records of the atomic bombings), Vol. 9, Nihon Tosho Sentā, Tokyo, 1991; *Shi no Dōshinen* (The concentric circles of death), Kōdansha, Tokyo, 1972; “*Genbaku*” to 30 Nen (Thirty years since the “A-bomb”), Asahi Shinbunsha, Tokyo, 1975.

31 Akizuki (1991 (1966)), above note 30, pp. 279, 282.

32 Akizuki (1975), above note 30, pp. 22–23.

4 p.m. the Urakami First Hospital had nearly collapsed in the fire. It was nevertheless the only remaining medical care facility in the Urakami district surrounding the epicentre.³³

The Shinkōzen National Primary School to which Dr Koyano had gone was one of the designated wartime emergency shelters (map, position 7), 3 km south of the epicentre. It, too, was damaged by the blast, but not long afterwards it started to provide aid for the wounded. However, it had to be closed a few hours later when secondary fires broke out in the afternoon of 9 August, although it was reopened on the 11th.³⁴ A large number of wounded also came in search of medical treatment to the clinic of the Japanese Red Cross Society's Nagasaki branch (map, position 8). The clinic had also been damaged by the explosion, but Dr Ikuyuki Takiguchi and others, including Red Cross nurses, tirelessly provided emergency treatment.³⁵

When the bomb fell there were approximately seventy private practitioners and retired medics in the city of Nagasaki: twenty of them died, twenty were injured and somewhat fewer than thirty remained active in Nagasaki during the aftermath.³⁶ Thus a considerable proportion of these doctors took part in medical relief activities immediately after the disaster. In addition to the medical relief centres mentioned above, two others, in national primary schools in the Inasa district (map, position 5), which was 2 km from the epicentre, and in the Katsuyama district (map, position 6), which was 2.9 km from the epicentre, were operational quite soon after the bombing; it was also reported that one medical relief centre was set up in a private residence and another in a Buddhist temple in the city.³⁷ The doctors had to cope with extreme psychological stress as well as an acute shortage of material. In conditions where the severity of patients' injuries was extreme and the lack of proper equipment and material was overwhelming, the doctors' sense of personal responsibility that they must carry out their duties and obligations as physicians was all the greater.

Relief missions dispatched from neighbouring areas: the Ōmura Naval Hospital

Masao Shiotsuki (aged 25), who worked at the Ōmura Naval Hospital (now the Ōmura National Hospital), 19.5 km from the epicentre, had just graduated from the Navy Medical School.³⁸ First there was the flash of the A-bomb, and then, 55 seconds later, "there was a tremendous boom as though an ordinary bomb of

33 The A-bomb disasters, above note 6, p. 50; Atomic bomb damage of Nagasaki, above note 25, pp. 473–6. In the Urakami district, apart from the Urakami First Hospital, the main building of Mitsubishi hospital (3.5 km from the epicentre) barely maintained its medical facilities but was also assigned to relief work.

34 Atomic bomb damage of Nagasaki, above note 25, p. 559.

35 A history of a hundred years, above note 20, pp. 16–17.

36 Atomic bomb damage of Nagasaki, above note 25, pp. 377–8.

37 *Ibid.*, pp. 475–503.

38 Masao Shiotsuki, *Doctor at Nagasaki: My First Assignment Was Mercy-Killing*, Kōsei Publishing, Tokyo, 1987 (original Japanese edn: *Hatsushigoto wa "Anrakushi" datta*, Kōbunsha, Tokyo, 1978).

medium size had exploded in the immediate vicinity”, shattering many window panes at the hospital.³⁹ Just one hour later the first report came through the naval communications network, saying that the same type of bomb as that dropped on Hiroshima had also been dropped on Nagasaki. Following this report a “special relief mission” duly aware of the dangers of radiation was organized, with Shiotsuki’s superior officer as its leader. Shiotsuki remained in the Naval Hospital as the corps leader’s replacement officer on duty.

The Ōmura Special Relief Mission dispatched to Nagasaki set up temporary relief facilities at what remained of the fire-ravaged Ibinokuchi police station 1.6 km from the epicentre (map, position 4), and also, about four or five hours after the bombing, at the Inasa National Primary School 2 km from the epicentre (map, position 5). A special relief mission dispatched from the Isahaya Naval Hospital, which was closer than Ōmura to the Nagasaki city centre – Isahaya was situated 25 km by road north-east of the city, whereas Ōmura was 35 km away by road – began to provide medical assistance even earlier (between three and four hours after the disaster) at the Irabayashi National Primary School 3.4 km from the epicentre (map, position 9).

According to a nurse who was part of the Red Cross Relief Team No. 362 dispatched from Ōmura – and it should be noted that the nurses who organized these relief activities were all sent by the Japanese Red Cross Society – they made a forced penetration into the flames by truck and, “amidst a painting of hell that threatened to make one fall into a faint” yet at the same time “frantically suppressing fear”, carried out relief activities even after nightfall, until they had exhausted all the medical supplies they had brought; only then did they return.⁴⁰ According to Major Masatoshi Katsu, an army doctor who was the Isahaya Special Relief Mission leader in charge of directing the activities of about 50 other people, their special relief mission could not give treatment at night even though they had brought along enough bandages and medicine, because there were “no electric lights”.⁴¹

Transport of wounded by the “relief train”

At about 5 p.m. a telephone call came through to the Ōmura Naval Hospital from the mayor of Ōmura city, asking for help for Nagasaki’s wounded people. It pointed out that because the “Nagasaki Medical College and all the treatment centres both within [the city] and on its periphery had been demolished”, the wounded were to be transported from the disaster area to Ōmura on a “relief

39 Ibid., pp. 14–17.

40 Photographs of the A-bombing revived, above note 19, pp. 130–2.

41 City of Nagasaki (ed.), *Nagasaki wa Kataritsugu* (Nagasaki hands down the story from one generation to the next), Iwanami Shoten, Tokyo, 1991, p. 143. In addition to those of the two naval hospitals at Isahaya and Ōmura, a relief team from the National Obama Sanatorium also provided emergency medical care on the day of the bombing; it was the first relief team sent to the disaster area by any civilian organization. Atomic bomb damage of Nagasaki, above note 3, pp. 616–71; above note 25, p. 475.

train” and then onwards from the train station by truck, and so suitable preparations along those lines were requested.⁴²

In Nagasaki, this relief train played a major part in assistance to and evacuation of the wounded. The Nagasaki main line railway (see map), which had been disrupted by the A-bomb, was very quickly repaired, and at 1.50 p.m. on 9 August the first relief train was able to reach a point just 1.4 km from the epicentre. After picking up wounded from the fiercely burning disaster area, the train then headed back through the flames to nearby areas with facilities for medical treatment. Four relief-train runs were made before midnight that same day, transporting about 3,500 wounded.⁴³

At the time, the Ōmura Naval Hospital was considered a relatively large hospital, with the capacity to house 1,700 patients. The number of patients there when the bomb was dropped was 200, plus 864 staff members including medics and nurses attached to the hospital. Thorough preparations had been made for immediate admission of 1,000 casualties if any such need should arise.⁴⁴

It was about 8 p.m. when, under Shiotsuki’s supervision, the first group of wounded were transferred to military trucks from the first relief train that arrived at Ōmura Station. On seeing the condition of the wounded brought in by the relief trains, everyone at the Ōmura Naval Hospital stood appalled, gripped by tremendous horror:

In the open loading compartment, people had been stacked until there was no space left, and the living were indistinguishable from the dead. Their hair had been singed by the fire, their clothes were in rags, and their exposed flesh was burned and covered in blood. When we shone our flashlights on them, we could see countless fragments of glass, wood, and metal still embedded in their faces and backs and arms and legs. It was hard to believe that these were human beings. To make matters worse, a pitch-black substance like coal tar adhered to the faces and backs of all of them without exception. The shock that the NCOs and ordinary soldiers received was undoubtedly just as great as my own. As they all stood there looking on and holding their breath, not one of them moved. Many of those NCOs were combat veterans.⁴⁵

During the approximately three hours between 8 p.m. and 11 p.m. on the 9th, as many as 758 patients were accommodated in the Ōmura Naval Hospital.⁴⁶ Many of the wounded brought in by the train died before reaching their destination. Those who were transported later on the relief trains had injuries that were generally less serious. However, they all arrived barefoot, with torn clothing

42 Shiotsuki, above note 38, p. 45.

43 The A-bomb disasters, above note 6, p. 51. The large number of wounded were taken by “relief train” and trucks not only to Ōmura but also to army, naval and ordinary hospitals in the adjacent areas such as Isahaya, Kawatana and Shimabara.

44 Atomic bomb damage of Nagasaki, above note 25, pp. 518–20.

45 Shiotsuki, above note 38, pp. 46–7.

46 Afterwards, the director of the Ōmura Naval Hospital said, “I am quite sure that there must have been no other military hospital which could have in this way accommodated so many recently seriously wounded people in such a short time.” Atomic bomb damage of Nagasaki, above note 25, pp. 521–2.

and serious burns. At midnight most of the patients were in agonizing pain and still waiting for some kind of treatment. After careful consideration Shiotsuki gave those patients who clamoured for water, but were near death, as much water as they wanted, and administered morphine to those who were simply in too much pain. Shiotsuki could but consider that his first assignment as a doctor was “mercy-killing”.⁴⁷

10 August

The Nagasaki Medical College

By the next morning, the fires in Nagasaki were for the most part extinguished and the utter confusion had somewhat subsided. Many people had died during the night; the site of the disaster had become a ruin. There were so many dead bodies in the Urakami river that the surface of the water could not be seen. Survivors tried to fend off the fierce summer sun and, if completely unable to move, waited to be evacuated. Others wandered through the smouldering ruins, searching for missing family members; some voices could be heard from beneath the rubble. There were dead or wounded lying in the air-raid shelters. In the medical relief centres, great numbers of people groaned, shouted, raged, became insane. Most were beyond any medical treatment and died pleading for water.

Even at the Nagasaki Medical College, injured people whom Nagai and others had desperately tried to save were dying one after another. On the day after the A-bomb attack, Nagai, who had previously contracted leukaemia and was now continuing to help patients and search for missing colleagues in an environment polluted with radioactivity, was near exhaustion:

Even though patients on the verge of death were groaning on the floor before my eyes, I lacked the impulse to try to do anything about it. Of course no sanitary materials remained, and I had no energy for dressing wounds. I could only ask, “How do you feel?”, provide some water to drink, or give them some pumpkin to eat. I was sorry about not doing more.⁴⁸

In any case, there was very little that Nagai and others could have done. An employee of the Medical College (aged 15), who was 3 km from the epicentre and helped in relief activities at the college from 10 August on, summed up the situation as follows:

Almost everyone said, “give me water”, but we had a hard time because there wasn’t enough water. We brought ampoules of glucose from the hospital’s

47 Shiotsuki, above note 38, pp. 50–3.

48 See Takashi Nagai, *Nagasaki Idai Genshi Bakudan Kyūgo Hōkoku* (Nagasaki Medical College reports on the atomic bomb relief work), Asahi Shinbunsha, Tokyo, 1970, pp. 214–16; the quotation is from pp. 277–8.

underground storage room, and had them drink that instead of water. We couldn't help them, and could only watch as their breathing came to a stop.⁴⁹

The Urakami First Hospital and the relief activities in Nagasaki

At 8 a.m. on 10 August, Dr Akizuki of the Urakami First Hospital started to examine his patients. Some Urakami people gathered in the hospital yard; they were all volunteers and willing to do whatever they could to save the wounded. It was only Dr Akizuki's deep sense of being a doctor that caused him to remain in the devastated hospital and care for his patients:

Yet that was far from giving real medical treatment. It was just that, being a doctor, I was making these rounds as if pursued by something I cannot quite explain, because I didn't have any medicine or medical implements with me.⁵⁰

Also on 10 August, the Nagasaki Prefecture set up a "local relief measures headquarters" at Ibinokuchi. It was assigned the task of evacuating wounded people trapped under collapsed houses or who had escaped to nearby mountainous or forest areas but had then been unable to move further. It also removed corpses, cleared streets and roads, and provided food for the victims.⁵¹ Some medical relief teams arrived in Nagasaki from naval hospitals in other parts of Kyushu, such as Kurume and Saga. A nurse who came on that day said,

Coming into the city, I was astounded at how terrible things were, and I could hardly say anything at all. On arriving at a relief centre for medical assistance I couldn't help but cover my eyes with both hands. I know I am a professional nurse, but it was just too frightful, too pitiless, too much a scene from a different world. The demand of "Miss, water, let me drink some water" was coming from every direction. When that voice could be heard no longer it meant that the person uttering it had breathed his (or her) last. Anyway, the fact that I couldn't do much was difficult for me, truly deplorable.⁵²

Questions of "racial discrimination"

The relief measures headquarters at Ibinokuchi issued the following guidelines: (i) first priority was to be given to the freeing of trapped survivors; (ii) medical attention was to be given first to those wounded persons whose lesions were relatively minor; and (iii) victims with burns covering as much as half of their bodies were to be left for later attention.⁵³ However, this strict rule of "first trying to save those whose lives can possibly be saved" gave rise to some friction when it came to providing emergency medical aid.

49 A survey of the A-bomb sufferers, above note 11, p. 302.

50 Akizuki (1975), above note 30, p. 40.

51 Atomic bomb damage of Nagasaki, above note 25, p. 386.

52 A survey of the A-bomb sufferers, above note 11, p. 345.

53 Atomic bomb damage of Nagasaki, above note 25, p. 386.

On 10 August a man from the Korean peninsula was brought to a primary school in Isahaya that was being used as a medical relief centre. He had been exposed to the atomic explosion while standing in front of the Nagasaki railway terminal station 2.4 km from the epicentre (see map) and had extensive burns on the left side of his body, from his face down to his waist. At the primary school he saw that some forty to fifty Koreans had been left in one of the classrooms, looking like “charred and festering lumps of meat”. Representing his fellow Koreans, who were unable to speak Japanese, the Korean patient conferred with a Japanese official at the school:

“Did you ask the Koreans their names and addresses?”, I [the Korean patient] asked. “Well, I [the Japanese official] was too afraid to ... And besides, I don’t understand their language.” I retorted, trembling with anger, “Do you people think that settles the matter? You brought these Koreans to Japan against their will, and you think that’s okay?! For what purpose were we Koreans led into to such a horrible situation?! They won’t last much longer. They’re not likely to recover now. But just because of that, do you think it’s okay to leave them here like this?” “But then, there’s nothing more we can do for them.” Listening to this reply, I shouted out, with a sensation that my chest would burst, “That won’t do! Can that kind of thing be allowed?! Are you Japanese intending to apply discrimination against Koreans?!” “But then could you tell me what we should do?”⁵⁴

The Korean patient suggested finding an interpreter, and the Japanese official tried to find one but was unable to. The Korean patient thus had to begin, by himself, making a list of names and addresses of all the wounded people in the classroom, but after writing down the twelfth name he lost consciousness. The next day he was taken to the Isahaya Naval Hospital, but “there all they did was to dab a little bit of something on the wounds”.⁵⁵

Historians would be unable to provide evidence that during the initial medical relief activities in Nagasaki there were “no cases” of ethnic discrimination, for there are no historical records which definitely prove that such cases did not occur. On the other hand, there are several testimonies, at least during this *initial* period, of Korean A-bomb victims that do not mention any discrimination on the part of Japanese but on the contrary even make a point of referring positively to “being helped” by Japanese individuals.⁵⁶

54 Nagasaki no Shōgen Kankō-kai (Publishing Committee for Testimonies of Nagasaki) (ed.), *Nagasaki no Shōgen, Dai Yonshū* (Testimonies of Nagasaki, 4th collection), 1972, re-ed. Sadao Kamata and quoted in Saburō Ienaga et al. (eds.), *Nihon no Genbaku Kiroku* (Japanese records of the A-bombings), Vol. 11, Nihon Tosho Sentā, Tokyo, 1991, pp.177–84.

55 *Ibid.*, p. 184.

56 For example, a Korean labourer who was A-bombed on 9 August and whose life had previously been saved by Dr Shirabe during the air raid of April 1945, referred to Dr Shirabe in an interview conducted by the Publishing Committee for Testimonies of Nagasaki in 1975 as “the person who saved my life, my god of life”, expressing profound thanks. See Nagasaki no Shōgen Kankō-kai (Publishing Committee for Testimonies of Nagasaki) (ed.), *Nagasaki no Shōgen, Dai Nanashū* (Testimonies of Nagasaki, 7th collection), 1975; re-ed. Sadao Kamata and quoted in Saburō Ienaga et al. (eds.), *Nihon no Genbaku Kiroku* (Japanese records of the A-bombings), Vol. 11, Nihon Tosho Sentā, Tokyo, 1991, pp. 435–7.

The Ōmura Naval Hospital

Since the previous day chief medical orderly Yasumasa Iyonaga (aged 25), a member of the Ōmura Special Relief Mission which carried out relief operations at Inasa, had spent twenty hours in non-stop relief work without sleep or rest, and had used up all his medical supplies. At that point his relief team returned to the Ōmura Naval Hospital, but on arriving there they were assigned to ward duty without being given a chance to rest. The wards at Ōmura were filled to overflowing with the wounded, just like those they had seen in Nagasaki. Iyonaga realized that they could do nothing but look on helplessly. He gathered together the orderlies and nurses who worked under him and told them,

Rather than increase their sufferings with treatment that will ultimately do them no good, try to make their deaths as easy and painless as possible. If you have any religious convictions, now is the time for you to show them and give moral support for the dying. Look after each and every one of them until the end comes.

He wept as he said this.⁵⁷ A young man who had been 2 km from the epicentre and was brought to the Ōmura Naval Hospital towards midnight on 9 August gave the following account:

What they called “treatment” was in name only. They only dabbed some mercurochrome on the wounds and that was all they did. Then I wrapped my body, covered with blood and mud, in the bed’s white sheet and a blanket, and began to sleep, probably looking as if I were dead. When on the next day [August 10] I woke up and it seemed to be around noon, a nurse gently placed a spoon of rice gruel in my mouth. With her cheerful smile, I found myself shedding tears involuntarily. I was impressed at how kind the several army doctors and the more than a dozen nurses were. Indeed, they were surely angels in white clothing.⁵⁸

The nurses sent by the Japanese Red Cross continued their tireless and devoted activities, while Dr Shiotsuki was completely at a loss. At the Ōmura Naval Hospital, with its relatively “complete” facilities, surgical operations for broken bones or for lacerated wounds were possible. However, the only available treatment there for burns was to apply some antiseptics. And there seemed to be no end to the fragments of glass, wood and metal that had to be plucked out piece by piece from all over the patients’ bodies.

As for the strange internal symptoms that gradually began to appear, there was nothing we could do but shake our heads and throw up our hands in despair. One patient, for example, was having an excruciating time breathing. When I applied the stethoscope to his chest, I could hear a strange rattling noise every time he drew a breath. I could even hear a sound like someone stepping on

⁵⁷ Shiotsuki, above note 38, pp. 57–62.

⁵⁸ A survey of the A-bomb sufferers, above note 11, pp. 260–1.

broken glass. I immediately had an X-ray taken. I had thought that the wounds on his chest and back were simply cuts, but in fact pieces of glass and other unidentifiable objects had penetrated straight into his lungs. How could such a thing possibly have happened? But more puzzling than the cause of his condition was the proper treatment. I simply did not have the slightest idea how I was going to remove so many foreign objects.⁵⁹

Dr Shiotsuki made up his mind and told the patient that he had contracted pneumonia, and that although he would be uncomfortable for a day or two, the pain would gradually go away; nevertheless, he kept on giving injections of morphine. By the next day the patient had died. “Such incidents happened again and again.”⁶⁰

11 August and afterwards

Sinkōzen: preparing to launch full-scale relief activities

In part of the Nagasaki area, fires were still burning even on the morning of 11 August. The medical relief centres were all full, and the wounded, whether outside or inside so-called hospitals, were plagued by innumerable flies, maggots, mosquitoes and lice. That day the largest of the relief teams (the First Relief Contingent of 249 members, belonging to the Hario Naval Battalion) arrived in Nagasaki, and from 12 August on, it could be seen that the relief system was gradually becoming better organized.⁶¹

On 11 August, the Hario Relief Team cleaned up the Shinkōzen National Primary School and camped there overnight. Most of its members moved on to Urakami on the 12th. The team had three specialized trucks and thus had great advantages in terms of mobility. The rumour soon spread among the city’s people that a relief team had been dispatched to the Shinkōzen National Primary School, and patients gathered there in the hope of receiving medical treatment. Wounded from the area around Nagasaki station, almost all of them in very serious condition, were transported to Shinkōzen. On 12 August an advance contingent from a branch of the Sasebo Naval Hospital arrived at Shinkōzen. Medical supplies had not yet arrived, but in the meantime sea water from the port area was scooped up into metal barrels, disinfected by boiling and then sprinkled with watering cans over the motionless patients. At Shinkōzen, it was not until 15 August that “medical treatment” in the true sense could be given, and it was not until the 16th that the relief centre could be renamed a “hospital”.⁶²

59 Shiotsuki, above note 38, p. 72.

60 Ibid, pp. 72–3.

61 Nagasaki hands down the story, above note 41, p. 144.

62 Atomic bomb damage of Nagasaki, above note 25, pp. 496–99. On 6 October 1945 the Shinkōzen Relief Hospital became a subsidiary hospital of the Nagasaki Medical College, with Dr Raisuke Shirabe as its director.

Setting up temporary relief centres at the Nagasaki Medical College, Nameshi and Mitsuyama

At dawn on 11 August the task began of transporting back to the site of the Medical College – using litters made from pieces of wood that had escaped the conflagration – the wounded evacuated to the hill behind the college on the day of the A-bomb explosion. They were brought to the temporary medical relief centre which the dispatched relief teams had set up in front of the college's main entrance. Amid all the rubble, it took an hour to carry the seriously wounded the 400 metres to the site of the college. With the help of the army and the police, the work of removing the dead, otherwise cleaning up the site and accommodating more wounded people proceeded apace. In the burnt-out classrooms the relief workers discovered a number of bones of students who just two days before had been attending lectures, neatly laid out according to the locations of their desks and seats.⁶³

When army personnel arrived to provide assistance, Dr Shirabe resolved to improve the medical treatment to be offered to all the patients of the Medical College. With the army's permission, he opened a temporary medical relief centre in the Nameshi neighbourhood, 4 km from the epicentre. The relief team led by Dr Shirabe left the Medical College on the evening of 11 August; after arriving at the new location they set up the temporary relief centre in an ordinary family dwelling, started examining the victims who had come to Nameshi seeking refuge and began treating the wounded. If a patient needed to have one of his legs amputated, relief workers would go to a nearby family's home to borrow a saw and, after disinfecting it in a washbasin, would use it to sever the bone. All in all, the medical care available had improved. Nevertheless, a large number of the wounded brought there soon became afflicted with diarrhoea and bloody stools and died, one after another, about a week after the bomb fell.⁶⁴

Dr Nagai, leading his own medical relief team, also left the Medical College in the evening of 11 August to open a temporary relief centre in the Mitsuyama district, about 5 km from the epicentre, where many wounded were thought to have fled in search of safety. At 4 p.m. the next day, Dr Nagai's relief team began making rounds to give medical examinations. Every house visited was crowded with wounded people. About a week after the bomb fell, Dr Nagai and the other relief team members could no longer walk properly due to hunger, fatigue and general physical weakness resulting from radiation. However, Dr Nagai writes that "Whenever I paid a house visit, any patient but also the patient's whole family would be extremely grateful." During this period, the members of his relief team suffered from stomatitis, hair loss, high fevers, diarrhoea, suppurating wounds and symptoms of reduced white blood cell count; they were frequently so

63 Nagai (1970), above note 48, pp. 215–16.

64 Raisuke Shirabe, "Nagasaki Ikadaigaku genbaku hisai fukkō nikki" (A diary of the A-bomb disaster until the recovery of Nagasaki Medical College), in *The fifty years after the A-bombing*, above note 5, Vol. 1, pp. 33–97; see especially pp. 43–58.

ill that they had to take to their beds. Dr Nagai and his twelve colleagues nevertheless gave treatment to over 125 patients and carried out rounds of house visits for two months.⁶⁵

The Urakami First Hospital: establishing its “emergency hospital”

On 11 August a man whose skin had been scorched black came to Dr Akizuki. The patient appeared to be “carrying on his back something like a white rice-ball”, but when he came close it turned out that what the doctor had thought was a rice-ball was in fact a cluster of countless white maggots.⁶⁶ At the Urakami First Hospital many people began to die, even though they had not suffered burns.⁶⁷

Likewise on the 11th, representatives from a police garrison came to see Dr Akizuki and told him that a special emergency hospital was to be established on the hospital’s premises. More and more serious casualties were brought in. “Among them were people who managed a forced smile, out of gratitude for the expectation that they would now probably be able to get some medical treatment.”⁶⁸ Like private physicians who were carrying out their own solitary relief work within the disaster area, Dr Akizuki was the sole physician staffing the Urakami First Hospital. Although he objected in desperation, the police garrison people soon left him with some 200 seriously ill patients, their whole bodies covered with wounds. They also left him a pack of medicines.

What was inside the pack was just a few bandages, fifty gauze patches, some absorbent cotton, one pound of zinc-containing essential oil, tincture of iodine, some alcohol, and some candles. But this wouldn’t suffice for even one day. Three hours went by after the police garrison people had departed. Still only ten people had been treated. There were still far more than a hundred of the wounded who had not received any treatment at all.⁶⁹

At 10 o’clock in the evening of the 11th, Dr Akizuki, completely tired out after three days of strenuous work, finally stood up and brought his medical examinations for the day to an end. Some of the patients who had still not been seen by him uttered cries of despair at the prospect of being left unattended and made last-minute pleas for treatment. On his outdoor pallet, Dr Akizuki wrapped himself in a blanket and wept.⁷⁰

65 Nagai (1970), above note 48, pp. 217–20.

66 Tatsuichirō Akizuki, “Genbaku hibaku no jittai wo kataru koto koso watashitachi no gimu” (Our duty is to tell what the atomic bombing really has done to us), in Nagasaki no Shōgen Kankō-kai (Publishing Committee for Testimonies of Nagasaki) (ed.), *Nagasaki no Shōgen, Dai Isshū* (Testimonies of Nagasaki, the 1st collection), 1969; re-ed. Sadao Kamata and quoted in Saburō Ienaga et al. (eds.), *Nihon no Genbaku Kiroku* (Japanese records of the A-bombings) Vol. 11, Nihon Tosho Sentā, Tokyo, 1991, p. 27.

67 Akizuki (1975), above note 30, p. 28. “They often began suffering from severe stomatitis, they would show swelling in the area around the mouth, and would complain of diarrhoea with bloody stools.”

68 Akizuki (1991 (1966)), above note 30, p. 327.

69 Ibid., p. 328–9.

70 Ibid., p. 330.

Ōmura Naval Hospital: unusual happenings

In the afternoon of 11 August, at the Ōmura Naval Hospital, medical orderly Iyonaga reported to Dr Shiotsuki that some of the patients there were beginning to lose their hair. Since the patients themselves were shocked to discover this, Dr Shiotsuki, taking Iyonaga's advice that he should pretend to be making his rounds quite normally as if there was no cause for alarm, slowly approached the bed of a female patient who was showing these symptoms. She was not very seriously injured and had that morning had borrowed a mirror and comb from one of the nurses, but when she had started to run the comb through her hair, it had fallen out in clumps. Dr Shiotsuki told her the lie that hair loss often happened to people with burns and that it would stop after a few days. At midnight the next day she died.⁷¹

The situation at the hospital changed radically. People with only mild symptoms who seemed to be on the road to recovery suddenly began dying. Their skin would show purple spots, blood would ooze from their gums, and if they were given injections of glucose or vitamins, their skin started to fester at the points where injection needles had been introduced. The same symptoms appeared not only in the patients, but also in women from Nagasaki helping with the relief work together with nurses sent by the Japanese Red Cross. These women had all been in the disaster area on the day the bomb exploded. They also died one after another. On their deathbeds they always asked to hold Shiotsuki's and other medical workers' hands.⁷²

The "true frightfulness" of the A-bomb

Less than a week after the bomb fell, the faces of those at the Urakami First Hospital who were relieved to have escaped immediate death began to turn dark. "There were many whose hair fell out overnight, who excreted blood from their noses and mouths, and who suffered from diarrhoea accompanied by blood. Even people without any visible wounds, who thought that they had been miraculously spared, later died one after the other from radiation, which vitiated the entire body."⁷³ These sudden deaths began in places relatively near the epicentre, and after 16 August their number increased daily. About two weeks after the bombing, such deaths spread to households just below Dr Akizuki's hospital.

On 3 September, Dr Shirabe fell ill with acute radiation sickness.⁷⁴ Dr Nagai also took to his sickbed.⁷⁵ Dr Shiotsuki, who was doing his best to help the

71 Shiotsuki, above note 38, pp. 62–3.

72 *Ibid.*, pp. 78–81.

73 Akizuki (1975), above note 30, pp. 31–2.

74 Dr Shirabe lost his sons to the disaster, but overcame his radiation sickness and devoted the rest of his life to medical elucidation of the A-bomb disease. He died in 1989. For details, see Raisuke Shirabe, "My experience of the Nagasaki atomic bombing and an outline of the damages caused by the explosion", available at www-sdc.med.nagasaki-u.ac.jp/n50/start-E.html (last visited 11 May 2007).

75 Dr Nagai died in 1949. His biography is given in Johnston's introductory chapter in the English edition of Nagai (1994), above note 27, pp. v–xxiii.

bomb victims at the Ōmura Naval Hospital and had not once entered the disaster area, saw his white blood cell count drop, though only temporarily, to as low as 3,000 per cubic millimetre.⁷⁶ Even he was suffering from radiation sickness because of his continuous and direct contact with victims who had been exposed to high levels of radioactivity. Dr Akizuki at the Urakami First Hospital was also suffering from radiation sickness.⁷⁷

The terror of the atomic bomb was not just that of the instant of the explosion. I was forced to experience its true frightfulness during a period of about 40 or 50 days from the end of August to the end of September or the early part of October. People who were exposed to radiation at a distance of from 500 to 2,000 metres from the epicentre almost all died within a 40-day period.⁷⁸

It was during this period that Dr Marcel Junod of the ICRC started trying to save victims of the disaster in Hiroshima. According to a 1950 survey, 73,844 people died in Nagasaki up to 31 December 1945 because of the A-bomb, while 74,909 people were counted as “wounded”, though still alive, at the end of that year.⁷⁹

Conclusion

If the numbers of dead in instances of indiscriminate urban bombing are compared, the number of people killed by the A-bomb attack on Nagasaki was considerably less than the approximately 100,000 who died in the Tokyo air raid on 10 March 1945 carried out by 344 B29 bombers using “conventional” weapons. The total area destroyed by fire in that air raid was 40 square kilometres, as opposed to the 6.7 square kilometres of the Nagasaki A-bombing.⁸⁰ In any case, the advent of the atomic bomb was an unprecedented threat to the principles of “humanity”. The promptly and utterly destructive nature of nuclear weapons meant that one of the greatest concerns expressed precisely by the International Committee of the Red Cross (ICRC) ever since the First World War – namely, the possible use of indiscriminate weapons in flagrant violation of human dignity and values through inhumane air attacks against non-combatants – had in the very worst sense become a reality.

76 Shiotsuki, above note 38, pp. 84–5. After the war Dr Shiotsuki specialized in neurophysiology; he was an eminent member of the Japanese medical community with his impassioned critiques and “rebel spirit”. He died in 1979.

77 Dr Akizuki revived the Urakami First Hospital and made enormous efforts as a leading figure in the anti-nuclear and peace movement in Nagasaki. He struggled with critical A-bomb disease for his last thirteen years, and died in 2005.

78 Akizuki (1972), above note 30, p. 143.

79 *Records of the Nagasaki Atomic Bombing*, above note 10, p. 14.

80 The total area destroyed by fire in the Nagasaki A-bombing was approximately 6,712,455 sq m, according to the Nagasaki Municipal Office. Atomic bomb damage of Nagasaki, above note 25, p. 246.

As Shiotsuki said, the A-bomb forced on the Nagasaki doctors who took part in the initial medical relief activities “a reality in which nothing they had learned from textbooks was of the slightest avail”. Although made to question the very meaning of their being doctors under such circumstances, they did their best to care for the “people who had no chance of surviving, for whom nothing remained but agony”. In view of the “prompt and utter destruction” of which Japan was warned by the Potsdam Declaration on 26 July 1945, and which was brought about by the atomic bombs, it is clear that law and custom alike were ineffective; the concept of “war” and hence that of “peace” changed radically thereafter. On 5 September 1945, just a month after the dropping of the Hiroshima A-bomb, the ICRC issued a grave warning of the dangers inherent in the new weapon.⁸¹

Needless to say, throughout Japan and elsewhere during the war there were innumerable doctors like Dr Nagai and Dr Akizuki who had to carry out relief work after enemy attacks in circumstances equally hopeless for many of the victims. The grieving of the Nagasaki doctors for their patients echoes that, for example, of the POW doctors in the cruel conditions of the camps built by the Japanese army along the route of the Burma–Thailand railway. With all their amazing improvisation, ingenuity and creative thinking, POW doctors such as Lt.-Col. (later Sir) Edward Dunlop of the Royal Australian Army Medical Corps and Capt. (Professor) J. Markowitz from Canada succeeded at least to some extent in saving their patients’ lives.⁸²

What, then, of the doctors in Nagasaki? To what extent were the Nagasaki doctors able through their efforts to provide medical care during that initial period, to save their patients’ lives? After the war Dr Shiotsuki knew that he never again wanted to have any part in “mercy-killing”; Dr Nagai, from a religious standpoint, eventually accepted the ordeal of the A-bomb and called for an attitude of reconciliation; Dr Akizuki expressed doubts about an attitude such as that of Dr Nagai and instead directed all his “anger and sadness” to keeping the memory of what happened in Nagasaki during those days alive. Fifty years after the war ended, François Bugnion, in *Remembering Hiroshima*, wrote that during the Cold War period the disasters of Hiroshima and Nagasaki were a sufficiently strong deterrent among the nuclear powers – together with their firm belief in what came to be called the doctrine of “mutually assured destruction” – to restrain any thought of actually using nuclear weapons again, but that although

81 As a result, at a Preparatory Conference of Representatives of Red Cross Societies held in Geneva in 1946, a resolution calling for the prohibition of the use of nuclear power for military purposes was adopted. Furthermore, at the 17th International Conference of the Red Cross held in Stockholm in 1948, the ICRC presented a report which referred to the 1946 resolution and earnestly asked all states to prohibit the use of nuclear energy for military purposes, and also to prohibit the use of any other indiscriminate weapons.

82 See Nobuko Kosuge, “Taimen tetsudō no nihongun horyo shūyōjo ni okeru fuhai, sokkyō, saisei” (The Japanese POW camps along the Burma–Thailand Railway – decay, improvisation, and regeneration), in Hayato Kosuge (ed.), *Fuhai to Saisei: Shintai-i-bunkaron III* (Corruption and regeneration: Body, medicine and culture III), Keiō Gijuku University Press, Tokyo, 2004, pp. 304–25. See also Jack Bridger Chalker, *Railway Artist: the War Drawings of Jack Chalker*, Leo Cooper, London, 1994.

the threat of full scale war had receded since the end of the Cold War, the danger of “nuclear proliferation” was greater than ever and had become the most serious threat hanging over the human race.⁸³ If the disaster of Nagasaki, like that of Hiroshima, has served as a deterrent, this is probably in part because those Nagasaki doctors have made us acutely aware of the nuclear disaster through the desperate records they have bequeathed to us.

Since the end of the Second World War nuclear disarmament has thus been at the very heart of disarmament efforts. Yet today there are an estimated 27,000 nuclear warheads, nations have emerged which are trying to bolster their “security” and strengthen their negotiating power through the possession of such weapons, and incidents occur in which murders or assassinations are committed by means of radioactive nuclear materials. In this so-called “second nuclear age”,⁸⁴ will the disasters of Hiroshima and Nagasaki continue to act as a deterrent for the possessors of nuclear weapons, forcing them to give up the idea of actually using them? Or will they serve the opposite purpose, namely as a precedent for speedily terminating a war? Could it in fact be possible that making people aware of the “prompt and utter destruction” caused by nuclear weapons – as this article, by chronicling those desperate relief activities, seeks to do – might tempt some military planners into actions that would confirm our worst fears?

83 François Bugnion, “Remembering Hiroshima”, *International Review of the Red Cross*, No. 306 (May–June 1995), pp. 307–13.

84 For the discussions about a “second nuclear age”, see especially “Five minutes to midnight”, *Bulletin of the Atomic Scientists*, available at www.thebulletin.org/minutes-to-midnight/board-statements.html (last visited 11 May 2007).