Profile

Koichi Tanigawa: a passionate voice in radiation disaster medicine

On March 11, 2011, when a force 9 earthquake and subsequent tsunami hit the Japanese east coast near Fukushima, Koichi Tanigawa was 900 km away in Hiroshima. Koichi Tanigawa was 900 km away in Hiroshima. But not for long. As the then Chairman of Hiroshima University’s Department of Emergency and Critical Care Medicine, and also Deputy Director of its Radiation Medicine Centre, he found himself with a key part to play in subsequent events. His institution had been designated a tertiary centre for dealing with major disasters, and within 2 days Tanigawa had been flown to Fukushima as leader of the radiation emergency medical team. What he found was a tragedy in which more than 15,000 people died, over 500 km² of land had been flooded, and three nuclear power reactors were damaged and leaking. “The Fukushima accident changed my life”, says Tanigawa.

The events at Fukushima constituted a compound disaster. “For the first couple of days it was difficult to establish command and control arrangements, and communications”, recalls Tanigawa. The Fukushima Daiichi nuclear power plant’s emergency accident plan relied on an off-site hospital centre only 4 km away, and well inside what became an evacuation zone. In the event, it could offer nothing. Tanigawa and his colleagues had to set up a new medical headquarters in Fukushima city, some 60 km away. Reyth Chhem, now Executive Director of the Cambodia Development Resource Institute in Phnom Penh, was working for the International Atomic Energy Agency in Vienna at the time of the disaster, and was in touch with Tanigawa. He is impressed by what Tanigawa achieved, not least in managing to train many of his colleagues on the spot. “There aren’t many people like him with this specialised expertise in Japan. They didn’t know how their own health was being affected”, he adds. “For me, Koichi is a hero.”

Tanigawa became a fierce critic of the arrangements made to evacuate older patients from the area, many of whom died—not from radiation, which was insufficient to do much harm, but from the trauma of the evacuation itself. He acknowledges that many people over-reacted to the fear of radiation. “But I do not blame people for over-reacting because we did not have sufficient information regarding the level of radiation”, he says. Yet his criticisms were important, says Kristi Koenig, Professor of Emergency Medicine and Public Health at the University of California, Irvine and Director of its Center for Disaster Medical Sciences. “That he brought this [the mishandled evacuation of the elderly] to public attention speaks to his character as somebody who wants to help the world, even if it may be embarrassing to him or to his country.” Koenig adds: “He’s an advocate for people such as the elderly who can’t do the advocacy for themselves. Having witnessed some of the very inhumane events during the evacuation of the elderly, he actually moved to Fukushima.”

Tanigawa believes that the lessons of Fukushima have been learned, at least up to a point. Is he confident that a similar incident would now be handled more successfully? “I am not confident”, he cautions, adding with a laugh, “I am much more modest than that”. But he does have hopes. “We will be able to mitigate the health effects of any future evacuation if we apply the lessons of the Fukushima accident.”

The seeds of Tanigawa’s choice of career were sown in his childhood. “I had pneumonia while I was in my primary school, and I had to see the doctors very often. I became interested in medicine.” He trained at Kyushu University, graduating in 1982. When it came to choosing a specialty he already knew the direction he wanted to travel in. “I felt I needed to be in disaster medicine because Japan is a disaster-prone country.” At that time, however, critical care hadn’t developed much as a specialty in Japan. So he opted for anaesthesiology, and went to the USA to pursue an advanced training in critical care at the University of Pittsburgh. He enjoyed his 2 years there, but staying permanently was never on the cards. On his return home in 1995, he worked as a lecturer for the Japanese Foundation for Ambulance Service Development, and then at Fukuoka University School of Medicine. It was in 2002 that he took up his appointment at Hiroshima University. By this time he’d already begun to focus on radiation disaster medicine. “In Hiroshima, of course, there were strong memories of the A-bomb”, he says. “I was exposed to the history and to the experiences of its victims.” This naturally enough fuelled his interest in radiation emergencies, and his subsequent involvement with Fukushima was hardly surprising.

In March, 2015, he became Vice President of Fukushima Medical University. The university had already assumed responsibility for the health of the Fukushima evacuees, and for providing whatever treatment might become necessary. Their exposure to radiation was much less than that experienced by the people of Chernobyl, but the need to monitor them was obvious. In addition to this work, the university decided to build on efforts to recover from the disaster by creating the Fukushima Global Medical Science Center. Besides handling local issues related to the nuclear accident, it will research planning for nuclear disasters, and share its experiences with the rest of the world. Fittingly, Tanigawa is Vice Director General of the new centre and is sure to nurture its future path—as Koenig points out, “Koichi’s contribution has been outstanding. He’s one of the most passionate people I know in this field.”

Geoff Watts