

ROLE OF INTERNATIONAL ATOMIC ENERGY AGENCY

Andrea Bianco, M.D.

I wish to express my appreciation for the invitation to participate in this conference which was extended by the American Medical Association to the Director General of the International Atomic Energy Agency (IAEA), Dr. Hans Blix. I represent him here; I am also here in my capacity as a physician responsible for the medical and biological aspects of radiation overexposures.

It is appropriate that I present my remarks at the end of this meeting. I am privileged to hear what was reported by the other speakers and can offer a summary and draw some conclusions from an international vantage point. I also hope I can contribute some constructive, concrete proposals for the future. I am aware that you may hear some unpleasant truths about physicians and their lack of involvement in planning for radiation emergencies. I too am a physician and I take my share of responsibility. I am also aware of the small number of knowledgeable physicians in this country who are true apostles preaching in the desert. This meeting will give them better visibility.

RESPONSE TO CHERNOBYL

What has been said in these two and a half days is valid for all nuclear energy and radiological emergencies--present, past, and future. But it is unavoidable that we make reference primarily to the most recent and serious one, Chernobyl. Reconstruction of the Chernobyl accident is a matter for specialists. I am no specialist in reactor technology and criticality accidents. The Soviets presented an excellent report in Vienna in August 1986, and IAEA produced in record time a document (Summary Report on the Post Accident Review Meeting on the Chernobyl Accident, Safety Series No. 75-INSAG-1) that contains a report on the emergency with observations, comments, and interpretations by international experts. Included is a list of recommendations for follow-up activities for the IAEA and other international organizations.

Chernobyl was a test, not only in the trivial sense that Soviet scientists were conducting an experiment at Unit 4, which failed, but also in the sense that it was a test for society. It has revealed how much improvisation, incompetence, arrogance, exhibitionism, protagonism, conflicting situations, disinformation or partisan use of information, and hysteria is intrinsic in our societal structure and ready to explode. Chernobyl has detonated this social bomb and all of these components, plus a touch of soap opera here and there, have come to light.

Director, Program on Health Effects of Radiation-Exposed Persons,
International Atomic Energy Agency, Vienna, Austria.

The event at Chernobyl was an extremely serious one with unfathomable and far reaching consequences. Chernobyl resembled a battlefield. There were casualties (fortunately a limited number); there were persons evacuated who must eventually be relocated; and there were thousands of persons, including children, pregnant women, and the disabled, who received doses of radiation that probably will affect their souls and minds more than their bodies and will certainly put a heavy burden on their future life. In Europe, public opinion was disoriented and confidence in public agencies was shattered; there was discontent, which was often unjustified and unfair; and there was irritation toward honest scientists and competent health specialists of all countries. There was and is a Babel of languages and a chaos of communications. On top of all this, there was and is the somewhat ambiguous behavior of some of the media, which in the past has often played a perverse role in tragedy. As Dr. de Ville de Goyet has described, the information of the competent expert was discarded in favor of alarmist interpretations of facts (I should say rumors) supplied by the poorly informed. The results were anxiety, hysteria, pressure on political structures, and irrational behavior by members of public agencies and by the population.

Physicians were unfortunately an integral part of the picture and responsible to some extent for this situation. I could tell you what happened in Vienna (and this is probably true for many European cities) where general practitioners and self-appointed "specialists" were bombarded on TV, on the radio, and in newspapers by anxious citizens, mothers, pregnant women, or simply salad eaters. An ocean of ignorance was exposed, generally with little concern for the public.

In many cases, this irresponsible behavior had tragic consequences. For example, it was estimated that several thousand abortions were performed in Europe. It is highly unlikely that we will ever know the precise dimensions of this phenomenon and what the increase in the numbers of abortions was as a consequence of Chernobyl. Regardless of the actual number of abortions performed, an ethical problem exists if even one of the interrupted pregnancies had been a wanted and welcomed pregnancy.

The aspects of the Chernobyl accident that demand prompt attention are:

1. Information about the emergency was too scarce and came too late.
2. The international response to protect the population and the properties was chaotic, in part because of chaotic input.
3. Members of the public, legitimately disoriented, took the attitude that they were survivors of the Day After and reacted accordingly.
4. Physicians added to the confusion, with the tragic consequences we have seen and with the administration of so-called "expert advice" that led to grotesque questions, answers, and behavior.

We are all responsible for this chaos. Society in general is responsible for leaving the public uninformed about this sort of event. Medicine is responsible for disregarding the importance of

receiving specific education in this field. It is the responsibility of society, medical associations, and each of us to put the wheels into motion for an unprecedented effort toward a better global understanding of the need to protect man, his environment, and the quality of life against disasters of this sort.

EDUCATIONAL EFFORTS OF INTERNATIONAL ORGANIZATIONS

What can and must be done to prevent and mitigate the effects of a Chernobyl-type accident? We are faced with a large task that has significant social, economic, political, sanitary, ethical, and philosophical implications. This is not "kids' stuff." It is a challenge for responsible, dedicated, competent professionals. Only a concerned, well-designed, and well-coordinated international intergovernmental program can solve the more urgent problems and help identify the methods and instruments to be used to improve the present situation. Any humanitarian contribution of equipment, medicine, financial donations, and experts is obviously welcomed, but that alone cannot resolve all aspects of this enormous challenge.

What have the international organizations already done, and what do they plan to do? About 10 years ago, the IAEA formulated guidelines for mutual emergency assistance in case of accidents. These guidelines have been revised periodically and updated, with the latest revision prepared in 1984. As a response to Chernobyl, two new conventions have been produced: (1) the Convention on Early Notification of a Nuclear Accident, and (2) the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. It is important to emphasize that "points of contact and a focal point within the IAEA shall be available continuously" for the implementation of the Conventions. A total of 58 and 57 Member States have signed Conventions 1 and 2, respectively, as of October 27, 1987. It is expected that these numbers will increase significantly in the near future.

According to the INSAG Summary Report, the areas below have been recommended as top priority. The IAEA has been designated to take the lead in these areas in close collaboration with WHO and other international organizations.

Epidemiology Study: A workshop entitled Guidelines on Methodology and Planning for an Epidemiologic Study of the Late Effects in Selected Population Groups has been approved and will be held jointly with WHO. It is understood that Soviet scientists will perform the epidemiology study within the framework of the USSR national health system.

Problems of Skin Lesions: An advisory group will be formed and several meetings will be held to study the problem of combined skin injuries. Special attention will be given to handling a large number of radiation victims with skin lesions.

Problem of Biological Dosimetry in Selected Cohorts of the Population: The IAEA has offered to Soviet health authorities a plan to activate more than 20 laboratories to collect blood samples, culture lymphocytes, and score chromosomal aberrations for several thousand cases. This database will serve as material for future studies of dosimetry, radiobiology, and reconstruction of the accident.

Medical Literature: Three publications are in preparation on the assessment and treatment of radiation overexposures. The first, dealing with general principles for the treatment of overexposures, was finalized recently in Paris and will include the experience gained at Chernobyl. Publication is imminent. The remaining two technical documents on contamination and external irradiation are in an advanced phase of preparation

A workshop will be organized with the close collaboration of WHO to discuss the status of medical education regarding radiation emergencies and to propose strategies to introduce the principles of the medical management of radiological and nuclear energy emergencies into the basic and postgraduate training of medical personnel.

Dozens of other program components have been introduced into the activities of the IAEA. Many new initiatives have been approved and will be implemented in the Division of Nuclear Safety and Radiation Protection Section of the IAEA. Most are joint ventures with sister organizations of the United Nations. The major responsibility in these undertakings is assumed by WHO, which is responsible for the existing network of collaborating centers; these centers have done an excellent job in treating dozens, perhaps hundreds, of radiation patients with competence and efficiency and without noise and vanity. This contribution must be acknowledged and praised, particularly in a time when sensationalism has played such a disturbing role on the stage of the Chernobyl drama.