A Scientific Panel for Determining Health Effects among Radiation Workers at Israel’s Nuclear Research Facilities

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The problem of compensation to employees of nuclear research facilities presents difficult issues to the practicing attorney. The major stumbling block to presenting a well-documented case in court is the worker’s inability to discuss the full range of duties at his or her work station over the course of employment. In addition the worker is barred from discussing the types and concentrations of chemicals and radioactive substances to which he or she is exposed, thereby limiting the ability of a competent physician to prepare an opinion on the causation between effects of exposure and disease. This paper presents the dilemma faced by the authors, who represented over 40 workers with cancer at the nuclear research facility in Dimona, Israel. It shows how the authors extricated themselves from this difficult dilemma by creating a panel of scientific experts under the court’s auspices and with the court’s blessings, which obviated the need for heavy procedural rules of court that apply in torts litigation in Israel. The scheme as developed and approved by the court can serve as a model to other countries where security matters are as important as matters of environmental health. — Environ Health Perspect 105(Suppl 6):1595–1597 (1997)

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Introduction

What follows is a case study, told in chronological fashion, about the attempts of the authors to enhance the protection of worker health at Israel’s largest nuclear research facility. The Dimona research facility was built amid great secrecy in the 1950s and that secrecy has surrounded the operations of the facility since its creation. This paper does not deal with production at the facility, as this remains a state secret and is irrelevant to the presentation. What is relevant, however, and not a state secret, is that the nuclear research facility by its very existence exposes its employees to radioactive materials. (Information obtained from interviews with 41 nuclear research facility workers and their families.)

What is less known is that because it is a research facility the workers are also exposed to a cocktail of chemicals, some of which are known carcinogens. (Information obtained from interviews with 41 nuclear research facility workers and their families.)

This paper suggests that the nuclear research facility made every effort to protect its workers from radiation exposure but failed to foresee the potential health effects of exposing them to dangerous chemicals. Therefore, it failed to set up proper protective mechanisms for chemical exposures comparable to those used to protect workers from radiation exposure. Further, the paper reveals that the mechanisms developed at the nuclear research facility for monitoring health effects among radiation-exposed workers were inadequate when the plant was first established and remained inadequate for some time. These protective measures probably were state of the art at the time they were initiated, therefore one can hardly criticize what was then accepted as standard practice for both protective and monitoring equipment.

One can, however, criticize the medical procedures established to monitor potential health effects of exposure from all sources. It appears from the numerous cases presented to us that the nuclear research facility failed, even taking the then standard of practice into account, to devise a mechanism for the early detection of cancer among workers; that the facility failed to develop a mechanism for assessing the veracity, relevance, and significance of worker complaints, worker exposure, monitoring systems, casualties, accidents, and medical overviews. As a consequence there has been no systematic approach to the early detection of cancer from radiation and other dangerous substances at the plant. This can be inferred because of the 41 cases presented to the authors, only 2 were discovered by the nuclear research facility medical staff. (Information obtained from interviews with nuclear research facility workers and their families.) The other 39 cases were detected by a general medical practitioner or by the worker.

The First Exposure

R. Laster became involved with the nuclear research facility in 1986 when a facility worker who had been exposed to chemical substances filed a claim for social security benefits asking for recognition of his sickness as a work-related disease (1). The worker in question had lost a kidney to cancer. A case was made to the court to prove the connection between exposure to dangerous substances and kidney loss.

The case emphasized factors normally not found in a typical worker compensation case. The two key factors were: a) that the nuclear research facility used its influence to slow down the process in court by not presenting information or by using delaying tactics; and b) the author was unable to discuss the case in depth with the client because the client was forbidden to discuss, even with his attorney, his work and exposure to named chemicals at the nuclear research facility. After hours, weeks, and months of discussions, debates, and court hearings, the attorney was able to piece together an account of the worker’s exposure to chemical substances in the laboratory. The attorney was also able to obtain a portion of the worker’s medical file at the nuclear research facility through cooperation of the facility’s legal advisor and under court pressure.

The medical file revealed that the worker had undergone periodic checks at the nuclear research facility as required by
the facility's internal regulations. Yet no one at the facility told the worker that uranium had been found in his blood during one of the checks. Nor did this marker lead the medical research team at the facility to follow up its health effects. This apparent oversight did help in the court case, however, because it allowed medical opinions from two experts to show that there was a possible connection between the uranium presence and the kidney cancer. At the same time, the nuclear research facility failed to get an opposing medical opinion. The case was finally resolved through an agreement between the parties affected by the court decision. The agreement led to compensation to the worker by both the nuclear research facility and Israel National Insurance (Jerusalem, Israel).

In-depth Review

This case led the authors to undertake an in-depth review of the legal framework within which the nuclear research facility operated to protect its workers from exposure to radiation and other dangerous substances. The research included a review of all Israeli legislation protecting workers from ionizing radiation as well as that creating the framework for occupational health physicians' examination of workers in plants using dangerous substances. It was discovered that the Minister of Labor was empowered by legislation to promulgate regulations protecting workers exposed to radiation and other dangerous substances and the Minister of Health had similar powers to protect those exposed to radiation or radiation substances. Regulations had been promulgated by both ministers, but after a close reading of the legislation and correspondence with the Ministry of Labor, the authors discovered that the two nuclear research facilities in Israel had been granted an exemption from these regulations. These regulations have since been replaced by the following regulations: Regulations for Safety at Work (Workers in Ionizing Radiation) 5751-1991 and Regulations for Safety at Work (Health and Safety of Workers in Ionizing Radiation) 5753-1992.

It was discovered that the legal advisor to the nuclear research facility convinced the Ministries of Labor and Health and the Prime Minister's office that internal regulations at the nuclear research facility were more stringent than regulations passed by the ministries and therefore worker health would be better protected if the ministry regulations were not applied to the nuclear research facility. The internal regulations unfortunately were more of a guideline for monitoring and protecting worker health than strict protective measures. In addition, violation of internal regulations would not bring about a criminal sanction, whereas violation of a ministry regulation probably would. The internal regulations required periodic medical checks of the workers, but workers were denied access to their medical files at the facility and therefore did not know what information these files contained. The authors, therefore, had to devise a way to get access to the medical files denied the workers. Using right to know regulations published in 1984 (2), the authors demanded all back medical files, all monitoring data at the worker's station, and all exposure levels for hazardous chemicals.

At first the legal advisor to the Atomic Energy Commission rejected the authors' request for this information, claiming that the regulations only came into effect in 1984 and in any case did not apply to the nuclear research facility. Under pressure from the Israel Attorney General's office, the legal advisor to the nuclear research facility released medical records for the entire period the worker was exposed on the job even before 1984, the year the right to know regulations were enacted. These data, however, pointed to another inherent defect in the monitoring mechanisms at the nuclear research facility. The authors discovered that there had been no monitoring of chemical substances at the facility; only nuclear substances were monitored. Therefore, no data were available for levels of exposure of workers to chemical substances at the facility.

Because there was no monitoring of exposure to chemical substances at the facility, the medical staff was not checking workers for exposure to chemicals and their effect on worker health. Further examination of the records revealed that the facility's medical staff had not correlated information about accidents at the facility and the onset of disease among workers. Also, no methods were used to internally detect chemicals or radiation in a worker's body even though it was known that workers ate and drank in areas where there was exposure to chemicals and radioactive substances. There were no cross-checks of events and causation nor were the workers fully informed of the deleterious effects of chemical substances as they had been about the health effects of nuclear substances.

Appeal to the Supreme Court

After the authors' in-depth review was presented, a meeting was held with the nuclear research facility's union representatives. R. Laster explained the results of his study. Union leaders were shocked to find that ministry regulations to protect workers from ionizing radiation did not apply to workers at the nuclear facility. A decision was then made to attack the exemption on the grounds that it was an administrative act so unreasonable as to be void. The case went to Israel's supreme court, known as the High Court of Justice, which acts in all cases in which aggrieved citizens have complaints against the state (3). Simply by filing the case in the High Court of Justice, the Ministries of Health, Labor, and Environment redrafted the regulations applying to workers in ionizing radiation.

However, because of pressure from the nuclear research facility, not all provisions of the regulations were made applicable to the workers represented by the authors. Therefore, the petition to the high court was retained until a formal hearing could be held on the issue. The high court, however, balked at this particular point. The court argued that if the full exemption had been reduced so that approximately 80% of the regulations (4) applied to workers at the nuclear research facilities, they would not interfere with the Ministries' decision.

After the successful attack on the exemption a number of workers approached the authors for help to secure compensation for their cancers, which were attributed to exposure to dangerous substances at the nuclear facility. In addition, several widows attempted to secure compensation for the deaths of their spouses.

Right to Know: Intervention by the District Court

The authors decided they would pursue a different route with the second group of cases. They decided not to file a claim in court unless they received more information from the nuclear research facility, which apparently was not forthcoming. Therefore, a precedent-setting court case was filed in the District Court of Jerusalem (5). The case was not based in torts but rather on the inability to file an action in court without further information. The court was asked to require the nuclear research facility to provide all information necessary to allow the claimants to file a case in court, including but not limited to medical files, exposure data, and monitoring results. In a hearing before the District
The compromise medical opinion to creation exposure that makes the decision for information.

The authors argued before the court that a case in torts could not be filed with a medical opinion attached because there was insufficient information available on which to base the medical opinion. The court, recognizing the authors' plight, pressured the government representative to compromise. The compromise called for the creation of a scientific panel whose members would receive security clearance to review all cases at the nuclear research facility, discuss all matters with the workers, and make a determination about causation with regard to exposure and disease.

The Compromise

Even after this 1994 decision the nuclear research facility succeeded in stalling the creation of a scientific panel for an additional 2 years. Requests were made to the court and to the Attorney General's office before the mechanism for creating the scientific panel was finally prepared, signed, and filed in court in 1995. The agreements as filed were given the effect of a judgment in court in 1996.

Based on this agreement the parties met over a period of a year and worked out the fine points for the creation of a scientific panel with security clearance that could review worker data from the nuclear research facility and determine causation with regard to exposure and cancer. Following is an outline of the agreed-upon process for appointment of a panel:

- Each side chooses a physician who has knowledge about radiation and chemical exposures and their respective effects on humans. These physicians will serve on the panel.
- The two physicians chosen then choose a third person to serve on the panel from a list drafted by the two parties. This third person should be an expert in the field of either radiation or other hazardous substances.
- The panel receives written arguments from the parties before its deliberation.
- The panel may question a worker and enter the nuclear research facility, if necessary, after proper security clearance.
- The panel then makes a determination if the cancer from which the patient suffers or has suffered (in the case of a claimant who is not alive) is connected to his or her exposure to radiation or any other hazardous substance(s) at the nuclear research facility. Only when this determination has been made can a claim be processed for compensation. If the panel determines that there is no cause and effect correlation a claim for compensation will not be filed.
- If a claim for compensation is filed with the authors to be filed in court, the worker (the next of kin in some cases) would also file a claim for national insurance with Israel National Insurance. This would ensure that if the worker were indeed found to have a claim for exposure to hazardous substances on the job, he/she or his/her surviving spouse would be compensated by National Insurance.

Conclusion

The agreed-upon compromise steps listed above are designed to work in a situation in which security matters are of utmost importance in a plant where workers have been exposed to hazardous substances. The system is useful in many ways. First, it protects both the state interests to ensure confidentiality as well as the interests of public health practice. It also enables information to be made available to an objective scientific panel with security clearance to make hard decisions about causation, reduces the number of cases in court and the time to settle cases that have to be filed and processed, and it enables a single panel to review numerous cases (in this particular situation, over 40 cases) within a shorter period of time than it would take for the court to review the same number of cases. At the same time, security is maintained by keeping the cases out of the courts and therefore away from the exposure these kinds of cases otherwise would receive at the hands of the local press and communications media. The importance of close control over scientific panel operations and media exposure (which would be lacking in an open court proceeding) is relevant to the Atomic Energy Commission.

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