Chemically Exposed Workers and Detoxification

At the conference, worker's compensation specialist Kathy Trost-Prisk, R.N., presented the case of a worker in his twenties who developed Parkinson's-like symptoms after accidentally ingesting chemicals. She referred the patient to the Sacramento Occupational Medical Group for detoxification, and the symptoms resolved. The clinic's Medical Director, David Root, M.D., is pictured on the right.

Presenters
David Root, M.D., M.P.H.
Kathy Trost-Prisk, R.N.

Panel Discussion Participants
Robert B. Amidon, M.S., J.D.
Keith Miller
Marion Moses, M.D.

Moderator
R. Michael Wisner

Occupational exposures are costly, involving production losses as well as treatment and compensation. Detoxifi-cation offers employers a means to prevent the build up of toxins or suspected toxins in the bodies of their workers. A number of independent studies have found the Hubbard detoxification program effective in addressing occupational exposures. Court rulings, including a review by the Supreme Court of the State of California, have established it as a compensable form of treatment under Worker's Compensation law.

A panel of medical and legal experts with extensive occupational medicine and worker's compensation experience examined the issues surrounding workplace exposures. Case histories illustrated the use of detoxification to address a wide range of occupational exposures. In most cases, workers disabled by their exposures recovered sufficiently to return to work.

Case Histories

In addition to thousands of individual case histories, a number of studies have examined the use of the Hubbard protocol in the treatment of workers exposed in occupational settings. R. Michael Wisner opened the panel with an overview of some of this work.

Painters

One hundred workers from a 12,000-member Southern California painter's union were randomly selected to undergo toxicological and medical screening. It was determined in advance that those with the highest chemical body burdens would undergo detoxification.

It was discovered that 92 of the 100 workers were affected in some way by toxic exposure. Findings included high levels of heavy metals in scalp hair, elevated liver enzyme levels, central nervous system dysfunction, pulmonary dysfunction, and higher than normal levels of mercury, lead and solvents in their tissue. In addition, workers complained of a variety of symptoms, including impaired vision, memory loss, head-aches, joint pain, impotence and weakness. Thirteen were not working due to disability.

Twenty-two workers with pronounced symptoms underwent detoxification. In every case lead, mercury and solvent levels were reduced and symptoms dissipated or were greatly reduced. Twelve of thirteen workers previously on disability were able to return to work.

Police Exposure at Chemical Fire

Mr. Wisner next related an incident in which police and firefighters in a Southern California town responded to an alarm from a chemical fire at an illegal toxic storage facility. A combination of 270 hazardous materials, improperly stored, were at the facility when it caught fire.

The firefighters, properly equipped with respirators and protective clothing, suffered little exposure and had no symptoms. However, the police officers had no safety equipment and were exposed to smoke and airborne chemicals.

Twenty-two police officers were referred for treatment by their worker's compensation provider. Of these, 13 had body burden levels high enough to warrant detoxification. The screenings revealed a wide range of chemical contamination in the tissues: halogenated hydrocarbons, solvents, pesticides, etc. Interestingly, the compounds found in the officers' tissues seemed to vary according to their location at the scene of the fire.

The 13 officers successfully completed detoxification, averaging 18 days on the program. All 13 were able to return to work.

Electrical Workers

Workers with a long-term history of exposure to polychlorinated biphenyls (PCBs) were selected for treatment. They were screened for body levels of PCBs and organochlorine pesticides before and after detoxification, as well as a follow-up screening. Body levels of PCBs and pesticides decreased significantly as the result of detoxification, and continued to decrease in the weeks following completion of treatment.

Firefighters

Firefighters in a southeastern state responded to a fire near a local hospital. The fire, said Mr. Wisner, produced much smoke but little flame, and many of the firefighters removed their masks. They were exposed to smoke for a period of three to four hours.

It was later discovered that the building housed electrical transformers. One had exploded during the fire, exposing the firefighters to PCBs and their combustion by-products, including dioxins and dibenzofurans. Swipe samples taken in the building interior after the fire showed some of the highest levels of dioxins and dibenzofurans ever recorded in America.

Fourteen firefighters were placed on the detoxification program. Fourteen firefighters who had not been at the scene were used as a control group. All participants were put through a series of 16 neuropsychometric tests (measuring factors such as reaction-time, memory, body balance, dexterity, etc.). While the results for both groups of workers showed deficits, they were more marked in the exposed group.

After treatment, results of neuropsychometric tests in the exposed group improved significantly while results in the control group remained unchanged. Neurometric testing found significant improvements in nerve function among the firefighters who completed the detoxification program. Symptoms in the exposed group were also greatly reduced and 13 of the 14 firefighters were able to return to work. (The 14th was unable to return due to hearing loss caused by the transformer explosion.)

Michigan Farmers

In concluding, Mr. Wisner recalled a large-scale environmental accident in which polybrominated biphenyls (PBBs), persistent toxic chemicals used in fire retardants, were mistakenly sold as feed for cattle, swine and chickens. The chemicals eventually contaminated meat, butter, eggs, milk and humans throughout the state of Michigan, as well as 12 adjoining states.

Pre- and post-detoxification biopsies were taken from a group of Michigan farmers. Significant body burden reductions of PBBs, PCBs and chlorinated pesticides were noted post-treatment, accompanied by symptom reduction.

Additional Case Histories

Following these presentations regarding exposed populations, the panel discussed individual exposure cases. In 15 years as medical director of an occupational medicine facility utilizing detoxification, David Root, M.D., has treated thousands of individuals disabled by chemical exposures. He presented the following case histories.

Exposure to Contaminated Washwater

A 23-year-old woman was employed at a California manufacturing facility that had an oil-burning electrical generator. The generator exhaust stacks were cleaned by a water scrubbing system, which filtered and recycled the water. Her job was to clean the system's filters each day, using a hose. She wore no protective clothing and she was doused daily with contaminated washwater.

After six months, she had multiple complaints: sore throat, hoarseness, eye irritation, malaise, extreme lethargy, interrupted sleeping patterns, and chloracne. She developed a lymph adneopathy, was tested and found to have infectious mononucleosis. The mononucleosis was eventually resolved, but she still had the other complaints, especially malaise, tiredness and chloracne.

She referred herself to Dr. Root for detoxification. On the fourth day of treatment a blackish greasy material began to ooze out of the pores of her skin. This continued for several days and eventually ceased. Chemical analysis of the exudate was inconclusive.

She completed the detoxification program with almost complete resolution of her symptoms. The California Worker's Compensation Appeals Board ordered her employer's compensation carrier to pay for treatment.

Twenty-two painters with pronounced symptoms of chemical contamination underwent detoxification. In every case lead, mercury and solvent levels were reduced and symptoms dissipated or were greatly reduced. Twelve of thirteen workers previously on disability were able to return to work.

"In the end, detoxification is very cost effective under the worker's compensation system."

—Robert Amidon, Attorney, Toxic Tort Litigator

Charles Gunnerson, a former World Bank Senior Project Officer and a co-investigator for a landmark detoxification study in the former Yugoslavia, speaks with Rena Weinberg, the President of ABLE International. ABLE (the Association for Better Living and Education) is a worldwide association of social groups and public interest activities operating in diverse settings—from literacy projects in South African townships to government-funded drug abuse treatment centers in Europe to correspondence courses in U.S. prisons. Their common denominator is that each activity uses the technologies of L. Ron Hubbard to improve conditions.

Occupational Exposure to Illegal Drugs

Dr. Root next recalled a case involving a 45-year-old police officer who was referred for treatment by a psychiatrist.

As evidence officer for a rural county sheriff's department, he was responsible for storage of materials from illicit drug labs seized during drug raids. Materials seized from the labs included chemicals used in the manufacture of the methamphetamine "crank"—ether, zinc, toluene, isopropyl alcohol, formaldehyde, benzene, chromic acid and others. His "office" was a particle board enclosure within a large, poorly ventilated shed which had neither heating nor air conditioning. Summer temperatures in the shed could reach 120 degrees.

A large raid resulted in four methamphetamine labs being brought into the storage facility at one time. The officer began to experience dizziness, nausea, dry heaves, watering of the eyes, light headedness, throat irritation, blurred vision and severe headaches, followed by the onset of shaking and tremors. The tremors were particularly bad in the right hand and continued to worsen.

When he was referred for treatment, testing revealed liver damage and peripheral neuropathy due to solvents, possibly mercury. He was given a full battery of neuropsychological tests.

At the end of his 16-day detoxification program he reported that most of his symptoms were gone, with his nausea and tremors almost completely resolved. His test results, including IQ and verbal processing, improved. He no longer felt the need to see a psychiatrist. He has maintained these gains over the past eight years.

Drilling Company Worker

Panelist Cathy Trost-Prisk, a worker's compensation referral specialist, joined Dr. Root in presenting the case of an individual she had referred for detoxification after a workplace accident.

A 20-year-old laborer working for a drilling company in Concord, California ingested a combination of diesel oil, fuel, and anti-freeze in attempting to siphon a drainage tank. He immediately complained of burning, pain and wooziness. One and one-half hours passed before he was admitted to a hospital, where his stomach was pumped.

Afterward he suffered from uncontrollable, convulsive shaking and stiffening. He lost all of his motor skills and developed Parkinson's-like symptoms: slurred speech, memory loss and facial stiffness. A PET scan revealed his dopamine levels were extremely low.

At the time he was referred for detoxification, he was taking medication, his condition had worsened and his prognosis was poor. Although the compensation carrier had been billed for several thousand dollars, the physicians on the case had not yet agreed on a treatment program.

At the end of detoxification, 31 days later, his mood was happy, without mood swings, his gait was nearly normal, he was off of medication and he only had very fine tremors of his hands. A second PET scan revealed dopamine levels had returned to normal. He returned to work.

One year later, he had once again developed some fine tremors of his hands, muscle spasms of his neck, throat and flank pain and fatigue. Treatment was reinitiated and the pain and tremors reduced substantially. He now functions at an almost pre-exposure level.

In addition to the fact that detoxification resolved this worker's problems in a relatively short period of time, the cost compared favorably that for previous attempts at treatment. These had included medication, bi-weekly physician visits, neuropsychiatric evaluation and physical therapy sessions three times a week.

Discussion

Following these presentations, panelists led a discussion with the audience regarding the value of screening workers for body burdens of chemicals, and the use of detoxification as a preventive measure.

Robert Amidon, who has served as prosecutor for the U.S. Department of Justice and prosecuted numerous cases related to workplace exposures, expressed the view that screening is in the best interest of employers as well as workers. The cost of detoxification is negligible, he added, as compared to punitive and other damages that could be assessed by a court.

There was a consensus among the panelists that due to the increasing prevalence of illness resulting from chemical exposures, physicians and worker's compensation providers cannot afford to ignore effective treatment methods.