

Case study on the Incidence of Stevens Johnson Syndrome Among Filipino Workers in Two Electronics Factories in Taiwan

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Abstract

From 1996 to early 1997, some 57 Filipino women in Taiwan were afflicted by Stevens Johnson Syndrome (SJS). Forty-six (46) of these women worked at two plants operated by an electronics company. A report, prepared by a team from the Philippine Department of Health (DOH) stated that the occurrence of SJS was "most probably secondary to occupational exposure to chemicals or radiation among susceptible individuals." The team, later on, referred the matter to the Occupational Safety and Health Center (OSHC) of the Department of Labor and Employment (DOLE). Since the DOH visit, no further cases of SJS were reported and 13 women who had been previously affected, in fact, resumed their positions at the identified plants. These facts caused the DOLE to organize its own mission to Taiwan in May 1998 to assess the workers' health and the existing working conditions at those two plants.

The DOLE team was composed of representatives from the OSHC and the Philippine Overseas Employment Administration (POEA). They were able to interview and examine all 13 workers who had previously contracted Stevens Johnson Syndrome and had returned to work at the identified plants. Blood and urine samples were also obtained from the subjects for blood lead, liver function (SGPT, SGOT, alkaline phosphatase) and solvent metabolites (hippuric acid, methyl hippuric acid) respectively. Measurements for the air concentrations of the following chemicals associated with SJS were done: formaldehyde, trichloroethylene, copper sulfate. Likewise, air concentrations of the following

chemicals found in the plants' material safety data sheets were measured: toluene, xylene, tetrachloroethylene ethyl alcohol and isopropyl alcohol. The safety evaluation was conducted through the use of a safety audit form and interviews with the health and safety officers of both plants.

The 13 women interviewed and examined were all in their twenties. None admitted to a history of smoking or alcohol intake. Physical examinations done on everyone showed areas of discoloration (both hypo and hyperpigmentation) on the extremities and back. Three women reported menstrual irregularities since their illness. Blood lead and liver profile values were within the reference range as were the measured levels for the urine metabolites. Measurements for the identified chemicals showed only one site in the gun assembly line of one plant wherein the air concentration of isopropyl alcohol exceeded its Threshold Limit Value (Station T13 - 494.23 ppm; TLV – 400 ppm). All other determinations for all other chemicals were within their recognized Threshold Limit Values. The plants employed licensed and accredited health and safety practitioners. All of their workers received some three hours orientation on safety policies, precautions and rules and both plants have active programs on different health and safety concerns.

The team did not find any new cases of SJS. The workers examined were in good health and the companies' management already have in place safety and health programs such that all except one of the measurements taken gave readings well below the Threshold Limit Values. No comparisons could be made with the findings of the previous DOH mission as the DOLE was not

part of this and because the present trip took place a year after the cases were reported.