

ACUTE DIOXIN SYNDROME IN MAN

Within days up to several weeks of exposure to 2,3,7,8-TCDD, the worker developed severe pruritus, erythema, and swelling of the face - particularly of the eyelids, nose, and lips. Over the next few days, there were inflamed nodules and pustules of the face, forearms, shoulders, neck and trunk. Comedones and cysts appeared about the same time. During the first two to three months, the skin lesions were accompanied by hyperpigmentation.

With the onset of these skin lesions easy fatigability and weakness were also noted.

About one month after the exposure, there was the onset of aching and pain of the legs. This pain was aggravated by exertion, which limited the ability of the worker to walk. The pain was so severe that the worker was hospitalized. There also may be chest pain, back and neck pain. The pain was episodic and lasted about six months.

During this time, the worker may complain of insomnia, nervousness, and may be emotionally disturbed.

On examination, the skin lesions, as described, will be observed. In addition, there may be tenderness in the right upper quadrant and the liver is palpable. On examination of the lower extremities, there is noted hypesthesia and poor muscle strength. The reflexes are hyperactive.

The laboratory examination revealed only a slightly elevated white count up to 15,000, within normal differential. The urinalysis as well as the blood chemistries are within normal limits.

A nerve biopsy showed a diffuse increase in collagen throughout their structures, with a slight increase in cellularity but no inflammatory cell infiltration. The myelin sheaths are scanty and appear swollen. With special staining, there was evidence of a diffuse loss of neurofibrils. Muscle biopsy showed no abnormalities.

In the more usual acute case, there is a more gradual onset of chloracne, with no other clinical abnormalities.

Of the original episode, there were 117 cases of chloracne with associated skin findings. Four years later, 80 were regarded as recovered, 24 had mild skin lesions, and 3 were characterized as having moderately severe chloracne continuing. In a survey on 36 of these workers, there were no other positive findings. 23 of these patients complained of symptoms other than cutaneous. These included aches and pains, nervousness, fatigue, loss of vigor, dyspnea, and decrease in libido. In most of these 23, the symptoms were mild except in 7 cases. There was no clinical explanation for these complaints, based on the physical examination or laboratory findings.

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