

Toxic Exposure to Betamix

TO THE EDITOR: I would like to report a toxic occupational exposure to an agricultural chemical that might be of interest to other journal readers. The case involved the development of allergic rhinitis, allergic dermatitis, and toxic hepatitis after use of the sugar beet herbicide Betamix—a mixture of the carbamates phenmedipham and desmedipham.

The patient, a 39-year-old man, initially sought medical care for fever, severe headache, diffuse arthralgias, persistent emesis, persistent sneezing, and a pruritic rash covering most of his body. His symptoms started within 48 hours of applying the herbicide to a sugar beet field. The patient said he did not use a mask and was not wearing protective clothing. A much briefer exposure to the chemical a month earlier resulted only in mild headache and arthralgias.

Clinical findings at the time of initial presentation included fever to 38.8°C (101.9°F), signs of allergic conjunctivitis and rhinitis, right upper quadrant pain, and a total-body macular-papular rash with scattered urticaria. The rash involved both exposed and nonexposed body areas with papules ranging from 0.5 to 2 cm in diameter and surrounding erythema varying from 2 to 4 cm.

Neurologic examination results were completely normal, and, despite the patient's symptoms, there was no joint swelling or redness and only minimal tenderness.

Laboratory findings included a normal complete blood count; urinalysis with 8 to 10 leukocytes, 1 to 2 erythrocytes, and no bacteria; an erythrocyte sedimentation rate of 28 mm per hour; and normal chemistry values—except for liver function tests. These revealed an alkaline phosphatase level of 166 U per liter, aspartate aminotransferase 55 U per liter, alanine aminotransferase 113 U per liter, and γ -glutamyl transferase 263 U per liter. Culture of the urine showed no growth. A complete viral hepatitis panel was negative.

The patient repeatedly denied anything more than occasional, moderate use of ethanol. His wife confirmed that he drank two to four beers a week. Both said independently that the patient had not taken any alcohol since his first herbicide exposure the previous month. He had no other known chemical, environmental, or infectious exposure of any kind.

Because of financial limitations, the patient was not admitted to hospital but was instead observed closely with several clinic visits. Intravenous fluids, along with parenteral and oral analgesics, antiemetics, and antipruritics, were used as needed.

Over the first week after the initial presentation, headache symptoms were replaced by right upper quadrant pain as the fever subsided. The patient's nausea and pruritic rash slowly resolved over several weeks. By one month after the initial presentation, the patient's abdominal pain had fully resolved and his liver function test results had returned to normal. He continued having pronounced symptoms of allergic rhinitis, however, which he had never had before.

No other agricultural workers with similar symptoms were seen at our clinic. The case was reported to the Idaho Department of Agriculture, where the patient was interviewed at length but provided no additional information.

A review of the recent literature yielded only one report of a serious reaction to the active ingredients of Betamix.¹ These investigators reported in the German dermatologic literature a case of photoallergic dermatitis and hepatitis in a German woman who had used phenmedipham.

I would like to add this case to the growing number of known toxic agricultural chemical exposures. With the continuing development of new mixtures and products, other new reactions are likely to occur.

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REFERENCE

1. Koch P, Bahmer FA: Photoallergic dermatitis caused by the herbicide phenmedipham. *Derm Beruf Umwelt* 1989; 37:203-205

Smoking Cessation Attitudes, Practices, and Policies Among California Primary Care Physicians

TO THE EDITOR: Recent studies have endorsed physician intervention as an important addition to smoking cessation efforts because of physicians' ability to reach large populations.¹⁻⁴ If smokers require medical care at least as frequently as nonsmokers and if physicians advise them during routine care to quit smoking, approximately 38 million of the 54 million smokers could be reached in a single year. A long-term success rate of even 5% to 10% would mean that 1.9 to 3.8 million persons would quit smoking.⁵

Under the auspices of California's Proposition 99, the Tobacco Tax Initiative, a 32-item questionnaire was developed to ascertain attitudes, practices, and policies related to tobacco control of primary care physicians in California. Primary care physicians were defined as active physicians in general practice, family practice, internal medicine, obstetrics and gynecology, or pediatrics. Using a California Medical Association mailing list, 5% of primary care physicians were randomly surveyed in July 1990, resulting in a total sample of 1,680 physicians. Follow-up surveys were sent to all nonrespondents, and 10% of the nonrespondents were surveyed over the telephone.

Of the 1,680 physicians contacted, 581 (35%) responded. Of these, 423 (74%) physicians were in practice, and our results are based on these physicians. The mean age of the respondents was 47 years. Most were male (82%) and non-Hispanic white (80%).

With regard to office smoking policies, 401 (94%) physicians reported that patients were not allowed to smoke anywhere in the office. Few had a designated smoking area in the office, and 355 (83%) did not allow staff members to smoke anywhere in the office. Of responding physicians, 330 (78%) had "no smoking" signs in their waiting rooms, and 234 (55%) had brochures or pamphlets in their waiting rooms for stopping smoking. Only 155 (36%) physicians had a list of community resources for smoking cessation available to patients.

Of these physicians, 253 (60%) reported that there was no routine system in their office to identify tobacco users by glancing at patient charts, but 379 (89%) said they routinely asked patients about their tobacco use. Those physicians who reported advising patients to quit using tobacco spent an average of 6 minutes doing so. The most common practices used by physicians to help patients quit smoking were informing patients of the benefits of quitting (93% advised most or all patients); recording results in medical records (81% did so for most or all patients); and advising patients to quit (94% told most or all patients).

Slightly more than half of the physicians thought they

were successful in helping patients to quit smoking. Physicians also agreed that it was their responsibility to convince tobacco-using patients to quit or help patients who wish to quit to do so and that they should be more active in speaking to lay groups about tobacco use.

While our response rate was low, these data do provide interesting information regarding tobacco control activities and policies of primary care physicians in California.

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REFERENCES

1. Glynn T: Methods of smoking cessation—Finally some answers. *JAMA* 1990; 263:2795-2796
2. Kottke TE, Battista RN, DeFries GH, Brekke ML: Attributes of successful smoking cessation interventions in medical practice—A meta-analysis of 39 controlled trials. *JAMA* 1988; 259:2883-2889
3. Ockene J: Physician-delivered interventions for smoking cessation: Strategies for increasing effectiveness. *Prev Med* 1987; 16:723-737
4. Cummings SR, Coates TJ, Richard RJ, et al: Training physicians in counseling about cessation—A randomized trial of the "Quit for Life" program. *Ann Intern Med* 1989; 110:640-647
5. Li VC, Coates TJ, Ewart CK, Kim YJ: The effectiveness of smoking cessation advice given during routine medical care: Physicians can make a difference. *Am J Prev Med* 1987; 3:81-86

An Inexpensive, Convenient Adjunct for the Treatment of Diabetes

TO THE EDITOR: Two reports in this journal have strongly suggested that chromium picolinate supplements are beneficial in the treatment of hypercholesterolemia.^{1,2} Clinical studies also suggest that chromium picolinate is highly beneficial in the treatment of non-insulin-dependent diabetes mellitus (NIDDM). In one study, 11 subjects with NIDDM were given either chromium picolinate (3.8 μmol [200 μg] of chromium) or a placebo daily for 42 days in a double-blind crossover study.³ A 14-day period off capsules was used between treatments. The mean values for fasting blood glucose, glycosylated hemoglobin, total cholesterol, and low-density-lipoprotein (LDL) cholesterol decreased significantly while the subjects were ingesting chromium picolinate. The levels of these tests analyzed in three of the subjects either increased slightly or did not change. With the exception of high-density-lipoprotein (HDL) cholesterol and triglycerides, however, the blood values were decreased in the remaining eight during supplementation with chromium picolinate. Fasting blood glucose values in the eight responders decreased by 24% from a mean of 185 ± 16 mg per dl to a mean of 140 ± 18 mg per dl. Glycosylated hemoglobin levels in those eight decreased by 19%. Total cholesterol values decreased 13% from 230 ± 15 mg per dl to 200 ± 11 mg per dl, and LDL cholesterol values decreased 11% from 158 ± 8 mg per dl to 141 ± 7 mg per dl in those eight subjects.

In a second preliminary study, five American Indians with NIDDM from the Red Lake Minnesota Band of Chip-

pewa Indians (1 man, 4 women) who had learned of chromium picolinate from health-care professionals or education classes volunteered to have blood analyses while using chromium picolinate supplements. After initial blood specimens were drawn, each of the volunteers ingested daily one capsule of chromium picolinate that contained 3.8 μmol of chromium. No other changes in dietary habits or exercise were initiated. After only two weeks, blood glucose levels had decreased markedly in each of the five volunteers. After eight weeks of supplementation, blood glucose values had decreased by 32.6% from a mean of 14.3 mmol per liter (258 mg per dl) to a mean of 9.3 mmol per liter (168 mg per dl). One of the female volunteers, who was being treated with 75 units of insulin per day, had an initial blood glucose level of 19.8 mmol per liter (357 mg per dl), but after eight weeks of chromium picolinate supplementation, her blood glucose value had decreased by 61% to only 7.6 mmol per liter (137 mg per dl). When these exceptional results were excluded, the blood glucose value of each of the other four was decreased by 25% from a mean of 12.9 (233) to 9.7 mmol per liter (175 mg per dl). Surprisingly, the total serum cholesterol levels in these volunteers were not in the "at risk" range but decreased by 8.2% from an initial mean of 4.7 mmol per liter (183 mg per dl) to 4.3 mmol per liter (168 mg per dl).

Although these two preliminary studies were conducted with a small number of volunteers, the high percentage of subjects responding (73% in one study, 100% in the other) suggests that chromium picolinate supplementation may be effective in regulating blood glucose levels and lipids in persons with diabetes. The results were particularly dramatic in the American Indians, a population that has a high incidence of NIDDM. The results described here show that large-scale trials are warranted for testing the efficacy and safety of chromium picolinate as a convenient, inexpensive adjunct to the treatment of diabetes.

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REFERENCES

1. Press RI, Geller J, Evans GW: The effect of chromium picolinate on serum cholesterol and apolipoprotein fractions in human subjects. *West J Med* 1990; 152: 41-45
2. Gordon JB: An easy and inexpensive way to lower cholesterol (Correspondence) *West J Med* 1991; 154:352
3. Evans GW: The effect of chromium picolinate on insulin controlled parameters in humans. *Int J Biosocial Med Res* 1989; 11:163-180

The Digital Rectal Examination of Women

TO THE EDITOR: The article "Is deleting the digital rectal examination a good idea?" in the July issue discusses principally the discovery of abnormalities of the prostate. I address the subject as a gynecologist who has never examined a male patient.

During 50 years of practice as an obstetrician-gynecologist, it was my policy to make a digital rectal examination on every new patient, at every annual examination, and otherwise when indicated. I kept a record of positive findings but not of the number of examinations, but there were many thousands. In those 50 years I discovered three rectal polyps and I missed, in one sense, one rectal carcinoma. This patient complained of rectal bleeding; my rectal examination results were negative so I referred her to a proctologist who called me two hours later to say that he could feel a rectal mass. This