CASE DEFINITION

3-Quinuclidinyl Benzilate (BZ)

Clinical description

BZ toxicity, which might occur by inhalation, ingestion, or skin absorption, is an anticholinergic syndrome consisting of a combination of signs and symptoms that might include hallucinations; agitation; mydriasis (dilated pupils); blurred vision; dry, flushed skin; urinary retention; ileus; tachycardia; hypertension; and elevated temperature (>101ºF). The onset of incapacitation is dose-dependent. It might occur as early as 1 hour after exposure and continue up to 48 hours (1).

Laboratory criteria for diagnosis

- *Biologic*: A case in which BZ is detected in urine (2), as determined by CDC.
- Environmental: No method is available for detecting BZ in environmental samples.

Case classification

- *Suspected*: A case in which a potentially exposed person is being evaluated by health-care workers or public health officials for poisoning by a particular chemical agent, but no specific credible threat exists.
- *Probable*: A clinically compatible case in which a high index of suspicion (credible threat or patient history regarding location and time) exists for BZ exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed*: A clinically compatible case in which laboratory tests on biologic samples have confirmed exposure.

The case can be confirmed if laboratory testing was not performed because either a predominant amount of clinical and nonspecific laboratory evidence of a particular chemical was present or a 100% certainty of the etiology of the agent is known.

Additional resources

1. Ketchum JS, Sidell FR. Incapacitating agents. In: Zajtchuk R, Bellamy RF, eds. Textbook of military medicine: medical aspects of chemical and biologic warfare. Washington, DC: Office of the Surgeon General at TMM Publications, Borden Institute, Walter Reed Army Medical Center; 1997:287-305.

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2. Byrd GD, Paule RC, Sander LC, Sniegoski LT, White E 5th, Bausum HT. Determination of 3-quinuclidinyl benzilate (QNB) and its major metabolites in urine by isotope dilution gas chromatography/mass spectrometry. J Anal Toxicol 1992;16:182-7.

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