



## CASE DEFINITION

### Riot-Control Agents

#### Clinical description

Cutaneous exposures of riot-control agents might produce dermal burns and rash (1-6). However, the majority of exposures to riot-control agents occur by inhalation. If a rapid onset of the following signs and symptoms occurs, the clinical description for an exposure to a riot-control agent has been met: 1) lacrimation and 2) one respiratory effect (i.e., nose or throat irritation, cough, or suffocation or choking sensation).

#### Laboratory criteria for diagnosis

- *Biologic*: No biologic marker for exposure to riot-control agents is available.
- *Environmental*: No method is available for detecting riot-control agents 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 riot-control agent exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed*: A clinically compatible case in which laboratory tests (not available for riot-control agents) 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. Danto BL. Medical problems and criteria regarding the use of tear gas by police. *Am J Forensic Med Pathol* 1987;8:317-22.
2. Fraunfelder FT. Is CS gas dangerous? Current evidence suggests not but unanswered questions remain. *BMJ* 2000;320:458-9.

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3. Hill AR, Silverberg NB, Mayorga D, Baldwin HE. Medical hazards of the tear gas CS: case of persistent, multisystem, hypersensitivity reaction and review of the literature. *Medicine [Baltimore]* 2000;79:234-40.
4. Hu H., Fine J, Epstein P, Kelsey K, Reynolds P, Walker B. Tear gas---harassing agent or toxic chemical weapon? *JAMA* 1989;262:660-3.
5. Thomas RJ, Smith PA, Rascona DA, Louthan JD, Gumpert B. Acute pulmonary effects from o-chlorobenzylidenemalonitrile "tear gas": a unique exposure outcome unmasked by strenuous exercise after a military training event. *Mil Med* 2002;167:136-9.
6. Varma S, Holt PJ. Severe cutaneous reaction to CS gas. *Clin Exp Dermatol* 2001;26:248-50.

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