

ACEP Recognizes Excited Delirium Syndrome

By Lisa Hoffman

The American College of Emergency Physicians formally recognized excited delirium as a unique syndrome on Sunday, taking an initial step toward identifying its causes and preventing the deaths that can occur in these patients.

Excited Delirium Syndrome (ExDS) has long been the sole purview of medical examiners, largely because the syndrome is often only diagnosed on autopsy. But as Mark L. DeBard, MD, the chairman of the ExDS Task Force, said, ACEP's approval of the task force white paper allows emergency physicians not only to recognize the syndrome and save lives, but to force it into the consciousness of law enforcement and emergency medical services.

"I want emergency physicians around the country to know that most of the time they're treating these cases successfully, but this allows the medical community to call it by name," he said. "That's the first step, and we need case reports to identify its characteristics."

Patients with excited delirium are challenging to everyone involved in their care, often leaving police and health care providers struggling to control their aggressive behavior rather than treating their medical condition, one that could suddenly end in death. The task force members found themselves facing a dilemma much like the decades-long one over sudden infant death syndrome: Researchers and clinicians argued whether ExDS was even a syndrome, essentially because no clear definition or cause exists.

The exact pathophysiology remains unidentified, the task force noted in a white paper it presented to the ACEP Council and Board of Directors during this year's Scientific Assembly. And although the syndrome is not always fatal, many patients experience cardiac arrest and death. About 250 patients die in the United States each year from ExDS, an estimated eight to 14 percent of those who experience the



syndrome, said Dr. DeBard, a professor of emergency medicine at Ohio State University College of Medicine and a past ACEP speaker and board member.

The task force called for identifying those whose deaths might be averted with early intervention. And that starts with identifying the triad of conditions that are the hallmark of ExDS: delirium, psychomotor agitation,

and physiological excitation.

A typical ExDS patient usually has acute drug intoxication, usually from cocaine, or less often has a serious history of mental illness on multiple medications. Because the syndrome is marked by aggressive and erratic behavior — being extremely combative and ripping off their clothes, for instance — the police often become involved and use physical or chemical control measures, sometimes a conducted electrical weapon (CEW). Mainstream media have often pointed to CEWs, commonly called TASERS, as the cause of these deaths while emergency physicians often think the syndrome is acute cocaine intoxication. But Dr. DeBard, also an attending at Ohio State University Hospital East, said

Potential Clinical Features of ExDS

- Pain tolerance
- Tachypnea
- Sweating
- Agitation
- Tactile hyperthermia
- Police noncompliance
- Lack of tiring
- Unusual strength
- Inappropriately clothed

something more is going on in these cases.

More than 95 percent of all published fatal cases were in men, with a mean age of 36. Besides being disoriented and hyperaggressive, patients tend to be imperious to pain, hyperthermic, and tachycardiac. In more than one million interactions with the public over two years, a yet-to-be-published



Dr. Mark DeBard

Canadian study identified potential clinical features for ExDS. (See table.) Some 698 encounters involved the use of force, and of those, 24 probable cases of ExDS were identified. All of those patients also exhibited tolerance to pain and tachypnea, according to the white paper.

ExDS, the white paper task force noted, is poorly understood, and although they suspect stimulant drug abuse, psychiatric disease, psychiatric drug withdrawal, and metabolic disorders to be the underlying culprits, no one knows how those lead to ExDS or why some cases but not others end in death.

Postmortem brain examination suggests that the “loss of the dopamine transporter in the striatum of chronic cocaine abusers may cause excessive dopamine stimulation,” but the precipitants remain unclear, according to the white paper. “Making a central dopamine hypothesis more appealing is the fact that hypothalamic dopamine receptors are responsible for thermoregulation,” which may explain the hyperthermia in ExDS patients, the white paper noted. Autopsy also has revealed elevated levels of heat shock proteins.

A large component of treating patients is helping law enforcement and EMS recognize possible ExDS patients, starting with behavior reported in 9-1-1 calls. Prehospital ExDS should be presumed, the task force said, if a patient is disoriented or not making sense, constantly physically active, imperious to pain, has superhuman strength, is sweating and breathing rapidly, has tactile hyperthermia, and fails to respond to a police presence.

Many experts advocate chemical sedation as a first-line treatment, and the task force concurred, recommending immediate medical assessment and treatment once physical control is obtained. “Initial assessment should include...vital signs, cardiac monitoring, IV access, glucose measurement, pulse oximetry, supplement oxygen, and careful physical examination,” the white paper noted.

Dr. DeBard said his drug of choice is ketamine, which is far faster-acting than the benzodiazepines and antipsychotics usually used. “These drugs buy you time,” he said. 

Behind the Story

EMN asked Dr. Mark DeBard what about ExDS excited him, if you'll pardon the pun. He estimates that 250 people a year die from the syndrome, which in the overall scheme of things, doesn't come close to those who die from coronary heart disease (almost half a million) or even the seasonal flu (36,000). So why ExDS? His answer: He saw a video of an ExDS patient on YouTube, and thought he could have saved the patient. Watch one case of many available online at <http://www.youtube.com/watch?v=kckeEVAxsJM&feature=related>.

Only in EMN

Read an editorial about the ACEP ExDS White Paper by Task Force Chairman Mark L. DeBard, MD, in the November issue of EMN.

