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NEUROLEPTIC MALIGNANT SYNDROME DIAGNOSIS: AN INTERNATIONAL CONSENSUS STUDY USING THE DELPHI TECHNIQUE

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Objectives: To develop consensus-based clinical diagnostic criteria for neuroleptic malignant syndrome (NMS).

Methods: A 17-member international expert panel of psychiatrists, neurologists, anesthesiologists and emergency medicine specialists was asked to identify clinical features that are most important or valuable in diagnosing NMS; when the feature was quantitative in nature, they were also asked to provide the corresponding critical value. The Delphi technique is a formal consensus procedure that employs a postal survey method to solicit opinions from each panel member, and to feed this information back to the entire panel in the form of anonymous, statistically aggregated data. This iterative process of information exchanges (opinions collected, group responses analyzed, feedback given to panel), or "rounds", continues until consensus has been reached. In the present study, the predetermined consensus criterion was a round-round mean change of 10% or less for any survey item, and 5% or less across all items.

Results: The expert panel reached consensus on the following diagnostic criteria in five iterations:

- (1) exposure to a dopamine antagonist, or dopamine agonist withdrawal, within past 72 hours;
- (2) hyperthermia;
- (3) rigidity;
- (4) mental status alteration;
- (5) creatine phosphokinase elevation;
- (6) sympathetic nervous system lability (2 or more of blood pressure elevation, blood pressure fluctuation, diaphoresis, urinary incontinence);
- (7) tachycardia and tachypnea; and
- (8) negative work-up for infectious, toxic, metabolic and neurological causes.

Conclusions: These are the first consensus-based diagnostic criteria for NMS, and may be preferred to previous ad hoc approaches to diagnosing this disorder.