

Author, Year	Design/ sample size	Offending Agents causing Toxicity	Outcome
<b>Boley SP, 2018</b>	Prospective observational analysis n=154	Antihistamines (68%), analgesics (19%), and antipsychotics (19%)	Delirium control in 79% of patients who received physostigmine versus 36% of those who did not (OR 6.6)  No difference in adverse events with physostigmine vs standard of care
<b>Arenas, 2018</b>	Retrospective cohort study n=191	Anticholinergic plant (35.1%), Diphenhydramine (29.3%), other antihistamines (7.3%), TCAs (1.6%), other agents (26.7%)	Patients exposed to non-diphenhydramine antihistamines, antipsychotics, and tricyclic antidepressants had 100% response to physostigmine  74.3% treated with physostigmine alone  One dose was effective in reversing or improving anticholinergic delirium in a majority (73.8%) of the patients
<b>Rosenbaum, 2010</b>	Retrospective study n=45	Undefined anticholinergic agents	31% received repeat dosing of physostigmine  45% of patient were d/c from ED  Patients are not likely to require repeat physostigmine dosing more than 6.5 h from their first dose
<b>Weizberg, 2006</b>	Case series n=2	Olanzapine overdose	1.5-2 mg of physostigmine led to regaining full consciousness
<b>Burns, 2000</b>	Retrospective study n=52	Undefined anticholinergic agents	Physostigmine controlled agitation and reversed delirium in 96% and 87% of patients vs Benzodiazepines controlled agitation in 24% and were ineffective in reversing delirium  Physostigmine had lower incidence of complications and shorter time to recovery
<b>Pentel, 1980</b>	Case Series n=2	TCA with prolonged QRS intervals (120 and 240 msec)	Both patients developed bradycardia and asystole after receiving physostigmine

**Conclusion:** Physostigmine at 0.5-2 mg is highly effective at reversing agitation and delirium in patients with anticholinergic toxidrome. Minimal adverse effects have been reported as long as there is no report of TCA ingestion and QRS < 100 msec. However, patient's delirium will return once the physostigmine wears off, so repeat dosing may be needed.

### References

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