

Barriers and facilitators to intensivists' adherence to hyperinsulinemia-euglycaemia therapy in the treatment of calcium channel blockers poisoning

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Background

Calcium channel blocker (CCB) poisoning is an increasing problem associated with significant morbidity and mortality. Hyperinsulinemia-euglycaemia therapy (HIET) have been described in observational studies as being effective and safe. Two studies have shown a low 42% adherence rate to Poison Control Centers (PCC) recommendations for the management of calcium channel blocker poisonings.

Research Question

To determine the behavioral determinants to adhere to PCC recommendations about treatment for CCB poisoning.

Methods

We recruited intensivists by convenience sampling, sending invitations to intensivists across two different provinces in Canada. Eighteen participants from nine different academic hospitals were interviewed. We recruited participants until we reached data saturation. We explored factors influencing the decision to initiate HIET using semi-structured interviews and analyzed the content of the interviews with an integrative framework using 14 theoretical domains (Theoretical Domains Framework). Two independent reviewers performed qualitative analysis of the interview transcripts and classified behaviors as being likely to facilitate, likely to be a barrier or unlikely to affect adherence. We used likely size of the impact and frequency of the behavior to determine relevant domains and resolved disagreements through discussion.

Results

We identified the main positive determinants in the following domains: '*behavioral regulation*' (i.e. algorithm for adjustment of perfusions and information provided to nurses), '*self-efficacy*' (i.e. confidence about being able to manage HIET), '*belief about consequences*' (i.e. fear of clinical deterioration or medicolegal consequences), '*reinforcement*' (i.e. clinical instability), '*nature of behavior*' (i.e. positive past experiences) and '*memory, attention and decision process*' (i.e. impact of PCC suggestion to use HIET). We identified the main negative determinants in the following domains: '*nature of behavior*' (i.e. preference for vasopressors over HIET), '*environmental context and resources*' (i.e. accessing D50% and increased nurse workload) and '*memory, attention and decision process*' (i.e. hypoglycaemic or hypokalemic patient, clinical improvement or stability with minimal vasopressor support).

Discussion

Behavioral determinants that we identified might be different in community hospitals. Our results are limited by the explorative nature of this study.

Conclusion

Implementation strategies targeting these behavioral determinants should be developed to improve adherence to CCB poisoning treatment recommendation.

