Severe to Very Severe Hypertriglyceridemia Management

INTRODUCTION

Patients admitted with severe to very severe hypertriglyceridemia (HTG) are at risk of developing acute pancreatitis. The primary aim of this review was to assess the evidence for the management of hypertriglyceridemia induced acute pancreatitis (HTG-IAP) in inpatient hospitalization.

Methods

- Literature review search completed April 8, 2021
- Search terms: “hospitalized” AND “adult” AND “hypertriglyceridemia” AND “management” AND “insulin” (3,130 results)
- Current (<5 years) literature search through 2021 limited to English yielded 759 peer-reviewed publications.
- Once screened for relevancy by title (n=17), abstracts (n=8), and full text (n=7).
- Three additional articles were identified through snowballing information in UpToDate and ClinicalKey, for a final sample of ten manuscripts.
- Synthesis of findings was facilitated using a research table for documentation of key findings and discussion.
- Level of Evidence: Level 1 (n=1), Level 2 (n=1), Level 4 (n=2), Level 6 (n=5), Level 7 (n=1)

Suggested hypertriglyceridemia algorithm

![Algorithm & Key adapted from UpToDate, 2021]

**Non-pharmacologic interventions**
- Diet, weight loss, exercise, and lifestyle modification

**Pharmacologic interventions**
- Lipid-lowering agents
- Insulin

**Additional research to evaluate IT, BPT, and lipid-lowering therapy (IT) versus blood purification therapy (BPT)**

- No significant difference in patients who received intravenous insulin therapy (IT) versus blood purification therapy (BPT)

- Treatment goal of triglyceride level <500 mg/dL

- Once treatment goal met, recommendation to start fibrates, niacin, omega 3 fatty acid, and statins

Recommendation to initiate BPT with organ dysfunction

IMPLICATIONS FOR PRACTICE

- Strong foundational comprehension of HTG-IAP care interventions enables care providers to advocate for evidence-based treatment interventions.
- Having these interventions initiated rapidly through the development of protocols and order sets ensures reliable treatment for the best outcomes.
- Additional research to evaluate IT, BPT, and lipid-lowering medications’ efficacy for HTG-IAP evidence-based treatment management strategies should be studied further.

CONCLUSION

- Answering the question of HTG-IAP treatment with IT and/or BPT was supported with limited evidence in peer-reviewed literature
- Nurses applying evidence-based management options for HTG-IAP in hospitalized patients may ensure reduced adverse outcomes
- Evidence-based treatment strategies must be readily accessible at the point of care delivery in easy-to-apply formats such as protocols and order sets