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PREDICTORS OF IN-HOSPITAL MORTALITY AMONG PATIENTS WITH THYROID STORM IN THE PHILIPPINE GENERAL HOSPITAL: A SEVEN-YEAR REVIEW (2017-2023)

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INTRODUCTION

Thyroid storm is an endocrine emergency that remains prevalent in developed and developing countries. Despite advances in treatment modalities and new scoring systems developed namely, the Burch Wartkofsky scoring and Japan Thyroid Association (JTA) scoring, this had a mortality rate of 10.7% to 75.0% in a Japanese study while locally, the mortality rate remained at 11.0% according to a 2003 study done at the Philippine General Hospital. This study aimed to determine the predictors of mortality among patients diagnosed with thyroid storm in Philippine General Hospital.

METHODOLOGY

A total of 115 patients were included from a retrospective chart review of medical records retrieved from the years 2017-2023 at the Philippine General Hospital.

RESULTS

The mean age of patients diagnosed with thyroid storm was 37 (29.4 to 49.5) years with a male-to-female ratio of 1:2.8 and having diffuse toxic goiter or Graves' disease as the most common etiology of thyroid storm. There were 36 patients (31.3% of cases) who were readmissions and most cases were on methimazole (42.6% of cases) and beta-blockade (46.1% of cases) prior to their admission for thyroid storm. Patients with cardiovascular disease were significantly more likely to die during hospitalization than those without having a crude odds ratio of 14.17 (95% CI 3.16-99.90). Also, patients who died had a significantly shorter duration of last intake of anti-thyroidal medication (IQR 0-1 days vs. 0-6 days) compared to those who survived ($p = 0.043$) was statistically significant. We had insufficient evidence to demonstrate a difference between the two groups in terms of age, sex, thyroid disease duration, comorbidities, and treatment durations. After adjusting for significant factors in the multivariate model, the need for a mechanical ventilator was statistically significant with an odds ratio of 117.43 (95% CI: 19.90-1278.18).

CONCLUSION

There were several factors affecting mortality among patients diagnosed with thyroid storm: the presence of cardiovascular disease, shorter duration of anti-thyroidal medications, presence of CNS manifestations, elevated FT3 levels, and the need for mechanical ventilatory support. After multivariate regression analysis, the need for mechanical ventilatory support was associated with mortality among patients with thyroid storm.

KEYWORDS

thyroid storm, thyroid, outcomes, predictors, mortality