ANGIOEDEMA: A REVIEW OF 367 EPISODES PRESENTING TO THREE TERTIARY CARE HOSPITALS IN BROOKLYN, NEW YORK

Stephen Tai, MD; Miguel Mascardo, MD; Nira Goldstein, MD

Downstate Medical Center, Brooklyn, NY 11203

ABSTRACT

The goal of our study was to evaluate the clinical characteristics of patients diag-
osed with angioedema in southeast Brooklyn, New York. As part of our study, we identi-
ﬁed 367 patients who presented to three tertiary care hospitals in
Brooklyn, New York from 1997 until 2008. A total of 268 patients were
females. The mean (SD) age at onset was 50.3 (18.2) years with a range
from 1 to 95 years. African American patients made up 62.4% of the
episodes. Prior angioedema history was reported in 108 (29.4%) of the
episodes. The mean length of stay was 2.0 (2.4) days. 3.3% of these patients
were intubated while 0.3% had a tracheostomy. 29.4% had prior episodes
of angioedema in 29.4% of the episodes.

RESULTS

• 367 patients with angioedema involving 372 patients were reviewed. 310
patients had a single episode of angioedema, 19 had 2 episodes, 3 had
3 episodes, and one patient had 6 episodes.

• Mean (SD) age was 35.8 (18.6) years, with a range from 1 to 95 years.

• African American patients made up 62.4% of the episodes.

• Type 1 episodes were found for 278 (75.7%) episodes, type 2 for 21
(5.7%) episodes, and type 3 for 48 (13.0%) episodes.

• Type 1 angioedema was found for 278 (75.7%) episodes, type 2 for 21
(5.7%) episodes, and type 3 for 48 (13.0%) episodes.

• There were 367 patients who had a single episode of angioedema.

• 237 (64.5%) episodes were treated with steroids, 262 (71.1%) were
treated with antihistamines, and 65 (17.7%) were treated with other
medications.

• A logistic regression model evaluating the potential predictors of admission
included the following significant variables: non-African American race,
advanced age, and rooming in with a history of alcohol use, and a history of
frequent secretions.

• The finding that 65.7% of the episodes occurred in females is similar to the
finding of Philip and Peacock that 58.6% of the episodes occurred in females.

• There were 367 patients who had a single episode of angioedema.

• A high percentage of episodes (75.7%) presented with 1 (totalal clotting)
arrested. In contrast to several previous studies that found that patients with
prion- or cowdromyopathic edema were more likely to be admitted for
airway intervention, life-threatening edema was found in 62.4% of the episodes.

• Of those enrolled for intubation, 34 patients were treated with ACE/ARBs
and multiple affected sites were significant predictors of the need for admission,
while presenting symptoms were not significant predictors. Only a small
number of patients (3%) required airway intervention, a finding that differs from
previous reports in which between 10 and 34% require intubation or tra-
cheostomy.

CONCLUSION

Angioedema involving the upper aerodigestive tract is a potentially
life-threatening condition that is seen with relative frequency in the
African American and ace inhibitor treated populations. Physical
examination, proper medical management, and appropriate airway
intervention are key factors in patient treatment. This study is one of the
largest series to date evaluating precipitating factors for angioedema and their clinical association.