

# Angioedema in patients using calcium channel blockers

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## Introduction

Angioedema is characterized by the swelling of the soft tissues in non-dependent body areas.

Therapy with CCB has been rarely associated with angioedema among case series and clinical trials (1-3).

We aim to describe the demographics, clinical features and outcomes of patients with angioedema due to calcium channel blockers (CCB).

## Methods

Retrospective observational study of patients hospitalized with angioedema due to dihydropyridine CCBs from 2015 to 2020. Patients on ACEi therapy, or with known history of food and drug allergies were excluded. The study was approved by the institutional review board.

## Results

Eighteen patients were identified with CCB-related angioedema. Fourteen patients were related to amlodipine and 4 cases were related to nifedipine. Further details in table 1 and figure 1.

**Table 1. Demographics, comorbidities, clinical features, treatments, and outcomes of patients with CCB-related angioedema.**

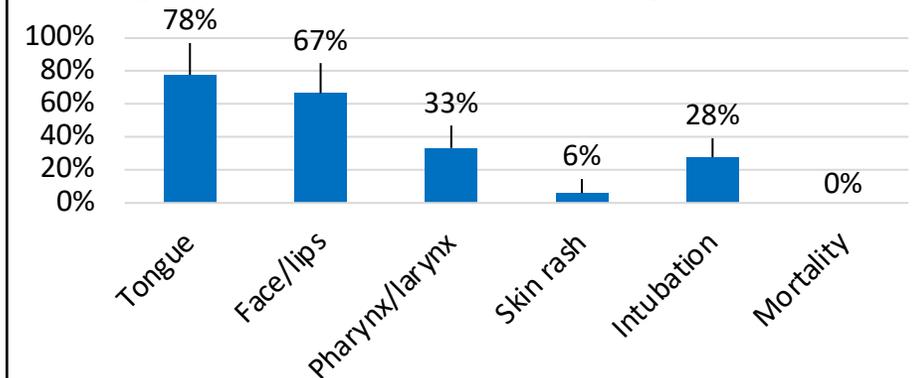
Demographics	Results
Age (mean)	67.5 ± 7.8
Body Mass Index (mean)	30.5 ± 2.6
Sex-Male (%)	7 (38.8)
Race-African American (%)	18 (100)
<b>Prior history and comorbidities</b>	
Prior episodes of angioedema (%)	10 (55.5)
Family history of angioedema (%)	0 (0)
Hypertension (%)	18 (100)
Chronic lung disease (%)	4 (22.2)
Smoking (%)	2 (11.1)
<b>Clinical features on admission</b>	
Skin rash – hives, erythema, pruritus (%)	1 (5.5)
Abdominal pain/diarrhea (%)	0 (0)
Systolic blood pressure (mean)	165 ± 12.6
Absolute peripheral eosinophil count (median)	66 (0-481.6)
<b>Angioedema location</b>	
Face/lips (%)	12 (66.6)
Tongue (%)	14 (77.7)
Pharynx/Larynx (%)	6 (33.3)
<b>Treatments</b>	
Steroids (%)	18 (100)
H1 blockers (%)	17 (94.4)
H2 blockers (%)	16 (88.8)
Epinephrine (%)	3 (16.6)
<b>Clinical outcomes</b>	
Intubation (%)	5 (27.7)
Mortality (%)	0 (0)
Hospital length of stay – days (median)	2 (0.13-9)

## Conclusion

Dihydropyridine CCB therapy may precipitate severe angioedema, with a significant rate of intubation.

This finding differs from prior reports and deserves further investigation.

**Figure 1. Clinical features CCB-related angioedema (%)**



### References

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