


ANGIOEDEMA

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FACEP
1/7/25



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What is Angioedema?

Edema of the skin, subcutaneous tissue or mucus membranes.

Potentially fatal if swelling progresses within the airway leading to hypoxia and death.

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Two Broad Categories Angioedema +1

Histamine Release:
degradation of mast cells-->histamine release-->classic allergic reaction and anaphylaxis (**urticaria** and **pruritus**) possibly from exposure to allergen.

Bradykinin-induced angioedema:
Overproduction or inhibition of bradykinin breakdown.
ACE inhibitors(lisinopril, enalapril) and ARB (losartan).

Excess of bradykinin ->increased vascular permeability, vasodilatation and edema.
(Bradykinin is a molecule that plays a role in inflammation.)

+1 **Hereditary Angioedema:**
Non -histamine related and etiology unclear.
?genetic mutation?

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Recognition
Swelling of the face, throat, lips, tongue, and neck.
Change in voice, difficulty speaking, drooling, and dyspnea.



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ACE Inhibitors

40 million patients worldwide
Prevalence of angioedema 0.1%-2.5%
20%-30% of E.D. angioedema cases

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Disposition of emergency department patients presenting with angiotensin-converting enzyme inhibitor-induced angioedema.
International Journal of Emergency Medicine. (2025) 18:11

N=94
ACEI 90 pts
ARB 4 pts
Improved in ED 53 (56%)
DC home 43 (45%)
Admit 51 (54%)

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Table 3 Association of presenting symptoms and emergency department disposition

From: Disposition of emergency department patients presenting with angiotensin-converting enzyme inhibitor-induced angioedema

Physical Finding	Finding Present (% of total)	Patients Admitted (% of group)	Patients Discharged (% of group)	
Throat Symptoms or Throat/neck Edema	23 (24.47)	17 (73.91)	6 (26.09)	0.0294*
Tongue Swelling	41 (43.62)	26 (63.41)	15 (36.59)	0.1169
Lip Swelling	54 (57.43)	27 (50.0)	27 (50.0)	0.3359
Facial Swelling	22 (23.40)	11 (11.70)	11 (11.70)	0.6471
All Patients	94 (100)	51 (54.26)	43 (45.74)	

*Significant difference by Chi-Square test.

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TREATMENT

Determine cause: Good luck!!
Medication list is key.

AIRWAY AIRWAY AIRWAY

Standard Allergic Reaction Medications:

Antihistamines H1 (diphenhydramine) and H2 (famotidine)
Corticosteroids
Epinephrine (IV, IM, Racemic Epinephrine)

Bradykinin-Induced:

Fresh Frozen Plasma - mixed data but commonly used
TXA- Tranexamic acid-more research needed
Purified C1-inhibitors-very early research and very expensive

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